GUIDING PRINCIPLES: Each student must leave school as:

A. A clear and effective communicator who:

(1) Demonstrates organized and purposeful communication in English and at least one other language;

(2) Uses evidence and logic appropriately in communication;

(3) Adjusts communication based on the audience; and

(4) Uses a variety of modes of expression (spoken, written, and visual and performing including the use of technology to create and share the expressions);

B. A self-directed and lifelong learner who:

(1) Recognizes the need for information and locates and evaluates resources;

(2) Applies knowledge to set goals and make informed decisions;

(3) Applies knowledge in new contexts;

(4) Demonstrates initiative and independence;

(5) Demonstrates flexibility including the ability to learn, unlearn, and relearn;

(6) Demonstrates reliability and concern for quality; and

(7) Uses interpersonal skills to learn and work with individuals from diverse backgrounds;

C. A creative and practical problem solver who: [1995, c. 649, §1 (new).]

(1) Observes and evaluates situations to define problems;

(2) Frames questions, makes predictions, and designs data/information collection and analysis strategies;

(3) Identifies patterns, trends, and relationships that apply to solutions;

(4) Generates a variety of solutions, builds a case for a best response and critically evaluates the effectiveness of the response;

(5) Sees opportunities, finds resources, and seeks results;

(6) Uses information and technology to solve problems; and

(7) Perseveres in challenging situations;

D. A responsible and involved citizen who:

(1) Participates positively in the community and designs creative solutions to meet human needs and wants;

(2) Accepts responsibility for personal decisions and actions;

(3) Demonstrates ethical behavior and the moral courage to sustain it;

(4) Understands and respects diversity;

(5) Displays global awareness and economic and civic literacy; and

(6) Demonstrates awareness of personal and community health and wellness;

E. An integrative and informed thinker who:

(1) Gains and applies knowledge across disciplines and learning contexts and to real life situations with and without technology;

(2) Evaluates and synthesizes information from multiple sources;

(3) Applies ideas across disciplines; and

(4) Applies systems thinking to understand the interaction and influence of related parts on each other and on outcomes.

CAREER AND EDUCATION DEVELOPMENT

Career and Education Development helps all students gain the knowledge and skills to interact with others, set goals and make decisions related to work, career and education. Success in work, career and education in the twenty-first century differs significantly from the twentieth century model. Lifelong employment with a single employer has virtually vanished. Success today is increasingly dependent on a sophisticated knowledge base, the ability to collaborate, to self-direct, and to adapt to change. Career, work and education goals and decisions for individuals will need to change over their lifetimes in relation to school and workplace requirements and personal responsibilities. As part of career and education development, students should see education as a continuing lifelong process that will prepare them for and make them adaptable in a fast-changing world.

> Embed Career and Education Development Instruction - The knowledge and skills outlined in Career and Education Development Standards are essential for all students. It is important that the knowledge and skills of Career and Education Development be learned in the context of schools, career and education. Stand alone courses in career and education development are artificial and less effective. School administrative units should determine the most appropriate content areas and school settings in which to embed these standards.

OUTLINE OF CAREER AND EDUCATION DEVELOPMENT STANDARDS AND PERFORMANCE INDICATORS

A. Learning About Self-Knowledge and Interpersonal Relationships
   1. Self-Knowledge and Self-Concept
   2. Beliefs and Behaviors that Lead to Success
   3. Interpersonal Skills
   4. Career and Life Roles

B. Learning About and Exploring Education, Career, and Life Roles
   1. Relationships among Learning, Work, the Community, and the Global Economy
   2. Skills for Individual/Personal Success in the 21st Century
   3. Education and Career Information

C. Learning to Make Decisions, Plan and Create Opportunities, and Make Meaningful Life Contributions
   1. The Career and Life Planning Process
   2. Decision Making
   3. Influences on Decision Making
   4. Societal Needs and Changes that Influence Workplace Success

A. Learning About Self-Knowledge and Interpersonal Relationships: Students identify, demonstrate, analyze, and evaluate:

- self-knowledge related to interests, skills, work and school;
- positive personal characteristics, attitudes, beliefs, behavior, and experiences that lead to success in school, work, and community;
- their ability to build and maintain a positive *self-concept*; and
- their ability to develop and recognize the positive *interpersonal skills* that influence effective work and effective relationships with others.

Although the performance indicators of Career and Education Development identify specific levels of performance at each grade span for the purpose of assessment, students at all grade spans should have opportunities to identify, demonstrate, analyze and evaluate.

	PK – 2 *PERFORMANCE INDICATORS*	3 – 5 *PERFORMANCE INDICATORS*	6 – 8 *PERFORMANCE INDICATORS*	9 – Diploma *PERFORMANCE INDICATORS*
A1 Self-Knowledge and Self-Concept	Students identify interests, skills, *habits of mind* and behaviors that build a positive *self-concept*.	Students identify and demonstrate interests, skills, *habits of mind,* behaviors, or experiences that build and maintain a positive *self-concept.*	Students explain how interests, skills, *habits of mind,* behaviors, and experiences support and maintain a positive *self-concept*.	Students reflect on and/or analyze interests, skills, *habits of mind,* personal behaviors, and experiences to maintain a positive *self-concept* and to aid them in making career and life decisions. a. *School-to-school* decisions. b. *School-to-work* decisions.
A2 Beliefs and Behaviors that Lead to Success	Students identify and demonstrate the skills, behaviors, and attitudes that lead to success in schoolwork.	Students make choices about and demonstrate behaviors that lead to success in schoolwork.	Students analyze how positive and negative personal traits, choices about behaviors, and the belief that one can successfully complete tasks/goals affect success in school.	Students demonstrate and evaluate strategies to improve their personal traits, behaviors, and the belief that one can successfully complete tasks/goals required for success in career and school. a. *School-to-school* decisions. b. *School-to-work* decisions.

	PK – 2 *PERFORMANCE INDICATORS*	3 – 5 *PERFORMANCE INDICATORS*	6 – 8 *PERFORMANCE INDICATORS*	9 – Diploma *PERFORMANCE INDICATORS*
A3 Interpersonal Skills	Students identify social skills that influence interpersonal relationships in positive ways. a. Getting along with others. b. Respecting differences. c. Working as a team. d. Managing conflict. e. Accepting/giving/using constructive feedback. f. Accepting responsibility for personal behavior. g. Demonstrating ethical behavior. h. Following established rules/etiquette for observing/listening. i. Demonstrating safe behavior.	Students identify decisions and demonstrate behaviors which reflect positive *interpersonal skills* and that lead to success in school or community. a. Getting along with others. b. Respecting diversity. c. Working as a team. d. Dealing with peer pressure. e. Managing conflict. f. Accepting/giving/using constructive feedback. g. Accepting responsibility for personal behavior. h. Demonstrating ethical behavior. i. Following established rules/etiquette for observing/listening. j. Demonstrating safe behavior.	Students demonstrate behaviors that reflect positive *interpersonal skills* and analyze how positive *interpersonal skills* lead to success in a variety of school, work and community settings. a. Getting along with others. b. Respecting diversity. c. Working as a team. d. Dealing with peer pressure. e. Managing conflict. f. Accepting/giving/using constructive feedback. g. Accepting responsibility for personal behavior. h. Demonstrating ethical behavior. i. Following established rules/etiquette for observing/listening. j. Demonstrating safe behavior.	Students demonstrate behaviors that reflect positive *interpersonal skills* and evaluate successful strategies that improve positive *interpersonal skills* in ways that lead to success in a variety of school, work and community settings. a. Getting along with others. b. Respecting diversity. c. Working as a team. d. Dealing with peer pressure. e. Managing conflict. f. Accepting/giving/using constructive feedback. g. Accepting responsibility for personal behavior. h. Demonstrating ethical behavior. i. Following established rules/etiquette for observing/listening. j. Demonstrating safe behavior.
A4 Career and Life Roles	Students identify and discuss *career roles*.	Students identify and explain the influences that *career and life roles* have on each other and on success in school or community.	Students develop and demonstrate positive strategies for accomplishing tasks, creating *balance* among their various *career and life roles* and reducing	Students demonstrate and evaluate successful strategies for accomplishing tasks, *balancing career and life roles*, and reducing stress in a variety of school, work

	PK – 2 *PERFORMANCE INDICATORS*	3 – 5 *PERFORMANCE INDICATORS*	6 – 8 *PERFORMANCE INDICATORS*	9 – Diploma *PERFORMANCE INDICATORS*
			stress. a. Time management. b. Goal setting. c. Resource management.	and community settings. a. Time management. b. Goal setting. c. Resource management.

B. Learning About and Exploring Education, *Career and Life Roles*: Students identify, demonstrate, analyze, and evaluate:

- the relationship between education and work, especially how learning new skills and educational achievement lead to increased work options and success with personal career and life goals; and
- the ability to identify and use education and career information for lifelong learning to be successful in this world.

Although the performance indicators of Career and Education Development identify specific levels of performance at each grade span for the purpose of assessment, students at all grade spans should have opportunities to identify, demonstrate, analyze and evaluate.

	PK – 2 *PERFORMANCE INDICATORS*	*3 – 5* *PERFORMANCE INDICATORS*	*6 – 8* *PERFORMANCE INDICATORS*	*9 – Diploma* *PERFORMANCE INDICATORS*
B1 Relationships Among Learning, Work, the Community, and the Global Economy	Students identify and demonstrate good study habits, attitudes, and behaviors that lead to successful relationships.	Students explain how success in school supports their ability to positively contribute to school, home, and community.	Students explain how educational achievement and lifelong learning lead to increased participation in school, work, community, and the world.	Students evaluate strategies for improving educational achievement, increasing participation as an involved citizen, and increasing work options and earning potential in a 21st century global economy.
B2 Skills for Individual/	Students identify *literacy* and *numeracy* as skills that lead to improvement and success	Students identify and describe skills that lead to student learning and success in the	Students analyze their skills in relation to those that lead to learning and success in the	Students evaluate strategies to improve skills that lead to lifelong learning and success in

Personal Success in the 21st Century	in the classroom.	classroom, and the achievement of work, career, and personal life goals. a. Literacy skills. b. *Numeracy.* c. *Critical thinking* skills. d. *Information and communication technology (ICT) literacy* (L= 21st Century Skills). e. *Interpersonal skills.* f. Other academic skills and knowledge.	classroom, and the achievement of work, career, and personal life goals. a. Literacy skills. b. *Numeracy.* c. *Critical thinking* skills d. *Information and communication technology (ICT) literacy* (L= 21st Century Skills. e. *Interpersonal skills*. f. Other academic skills and knowledge.	the classroom, and the achievement of work, career, and personal life goals. a. Literacy skills. *b.* *Numeracy.* c. *Critical thinking* skills. d. *Information and communication technology (ICT) literacy* (L= 21st Century Skills). *e.* *Interpersonal skills*. f. Other academic skills and knowledge.
B3 Educational And Career Information *(L) = future link to this information*	Students identify and locate information resources at home, at school, and in the community that improve study habits, schoolwork, or educational achievement.	Students identify and locate different types of career and educational information resources and use them to explore school and career choices.	Students locate and analyze the use of different types of resources, including *occupational information* and *labor market information*, to explore *post-secondary education, training,* and career choices.	Students use previously acquired knowledge and skills to evaluate and utilize a variety of resources to articulate a plan and make decisions for *post-secondary education, training,* and career choices. (L)

C. Learning To Make Decisions, Plan and Create Opportunities, and Make Meaningful Contributions: Students identify, demonstrate, analyze, and evaluate:

- the main components of the *planning process*;
- their ability to *balance career* and education *roles*;
- their ability to apply successful strategies for effective decision making; and
- their ability to analyze the influence of diverse and changing societal and global economic needs on personal decision making, work and education success, and work and education planning.

Although the performance indicators of Career and Education Development identify specific levels of performance at each grade span for the purpose of assessment, students at all grade spans should have opportunities to identify, demonstrate, analyze and evaluate.

	PK – 2 PERFORMANCE INDICATORS	*3 – 5 PERFORMANCE INDICATORS*	*6 – 8 PERFORMANCE INDICATORS*	*9 – Diploma PERFORMANCE INDICATORS*
C1 Planning Process	Students identify and give examples of how they make choices and set personal goals for school.	Students identify the parts of the *planning process* that assist in making choices. a. Self-knowledge. b. Information and resources about work and educational options. c. Decision making skills.	Students explain how the parts of the *planning process* assist in the exploration of education and work opportunities, and serve as tools for setting short- and long-term goals. a. Self-knowledge. b. Looking for and creating personal work options. c. Decision making skills.	Students use the *planning process* to make *school-to-school* and *school-to-work* decisions. a. Self-knowledge. b. Looking for and creating personal work options. c. Decision making skills.
C2 Decision Making	Students identify experiences and behaviors that reflect decision making at school.	Students identify behaviors and decisions that reflect positive and negative consequences in school.	Students compare and apply different models for decision making including the *rational, intuitive, and consultative models* for setting short- and long-term goals in career and education.	Students determine and apply effective decision making strategy (ies) for accomplishing short- and long-term goals related to *school-to-school* and *school-to-work* decisions.
C3 Influences on Decision Making	Students identify people and experiences that influence decision making in various settings.	Students identify behaviors that influence decision making in various settings.	Students identify behaviors that influence career and education decision making.	Students examine the potential forces of information that influence their career and education decision making.

C4 Societal Needs and Changes that Influence Workplace Success *(L) = future link to Social Studies*	No performance indicator.	No performance indicator.	Students identify and explain how diverse and changing societal and global economic needs influence personal decision making. (L)	Students analyze and evaluate strategies for addressing diverse and changing societal and global economic needs that influence personal decision making for workplace success.

ENGLISH LANGUAGE ARTS

The English Language Arts form the foundation for effective communication and depend upon the ability to construct meaning through reading, writing, listening, speaking and viewing and to present ideas through writing, speaking, and visual media. These skills, essential to the health of our democracy and the quality of our culture, have become ever more important since the modern explosion of communications media. Effective communication is critical regardless of the devices used or the distances over which we are communicating.

The study of language helps students to control their lives and become more effective thinkers--through communication, reflection, and understanding. To develop good thinking strategies, students must become engaged as active learners. To help them improve, students need to practice English language skills and receive frequent feedback across all areas of study. Parents, teachers, and other adults must encourage the interest in language that students bring with them when they first enter school. Students need to make the experience and enjoyment of English language arts a central part of their lives.

Collectively, the English language arts - writing, reading, speaking, listening, and viewing - constitute both a discipline in its own right, like mathematics or science, and a means of communicating about all other disciplines. Without a command of these arts it is impossible to think about, understand, or explain other disciplines.

Literacy Skills Across the Content Areas - The English Language Arts Standards intend to describe the knowledge and skills all students need to be successful. These skills are important for college, workplace and citizenship readiness. These skills are also essential, as students progress through their PK-Diploma experience, for accessing and sharing knowledge across content areas. Schools and teachers must take particular care to support and hold students accountable for the application of the performance indicators related to research, analysis of media, informational/position-taking writing, informational reading, listening and speaking, where applicable, across all content areas. Maine's business community and higher education institutions have formally and informally underscored this need for effective communication and cross-content literacy.

Research – Research is an essential skill for students' success in the workplace, in college, and in their personal lives. All students should be able to locate information to support decisions and answer questions. Schools must ensure that the skills and knowledge of research are applied in all content areas.

Reading and Writing Processes - The English Language Arts Standards attempt to present the processes of reading, writing and the varied genres related to the two in a clear, concise format. This approach may create the misperception that these aspects of English language arts are linear and entirely discrete whereas they are often dynamic, iterative processes and sometimes overlapping genres. Schools and teachers must recognize and accommodate this complexity in their student instruction.

Text Complexity - The use of reading standards is incomplete without a consideration of text complexity. The standards explain the knowledge and skills of reading. Text complexity provides a common understanding of the difficulty of the reading material for which the standards are applied. Text complexity can be determined in various ways including grade level reading lists, teacher judgment, and other standardized measures. An understanding of a student's reading ability, as defined by the text complexity that the student can successfully comprehend, is an important diagnostic tool for teachers as they work to

advance the student's skills and ability to use those skills with increasingly complex texts. The goal of the Maine *Learning Results* is to ensure that all students can read and comprehend texts that reflect the text complexity required by the workplace, college and citizenship.

OUTLINE OF ENGLISH LANGUAGE ARTS STANDARDS AND PERFORMANCE INDICATORS

A. Reading
- 1. Interconnected Elements: Comprehension, Vocabulary, Alphabetics, and Fluency
- 2. Literary Texts
- 3. Informational Texts
- 4. Persuasive Texts

B. Writing
- 1. Interconnected Elements
- 2. Narrative
- 3. Argument/Analysis Expository
- 4. Persuasive Expository
- 5. Practical Application

C. Research
- 1. Research

D. Language
- 1. Grammar and Usage
- 2. Mechanics

E. Listening and Speaking
- 1. Listening
- 2. Speaking

F. Media
- 1. Analysis of Media

A. READING: Students read to comprehend, interpret, analyze, evaluate, and appreciate literary and expository texts by using a variety of strategies. They connect essential ideas, evaluate arguments, and analyze the various perspectives and ideas presented in a variety of literary and expository texts.

A1 Interconnected Elements: Comprehension, Vocabulary, *Alphabetics, Fluency*

PK-2 PERFORMANCE INDICATORS

Students read texts, within a grade appropriate span of text complexity, and apply their knowledge and strategies of comprehension, vocabulary, *alphabetics,* and *fluency*. (L)

a. Use comprehension strategies to understand texts within a grade appropriate span of text complexity.
b. Develop vocabulary using knowledge of word parts and relationships.
c. Demonstrate *phonemic awareness* and use *phonics* to decode new words.
d. Read fluently and accurately with appropriate pacing and expression.

Grade 3 PERFORMANCE INDICATORS	Grade 4 PERFORMANCE INDICATORS	Grade 5 PERFORMANCE INDICATORS	Grade 6 PERFORMANCE INDICATORS	Grade 7 PERFORMANCE INDICATORS	Grade 8 PERFORMANCE INDICATORS
Students read and draw conclusions from texts, within a grade appropriate span of text complexity, (L) by applying their knowledge and strategies of comprehension, vocabulary, *alphabetics,* and *fluency.* a. Use a range of strategies as they read including constant monitoring,	Students read and draw conclusions from texts, within a grade appropriate span of text complexity, (L) by applying their knowledge and strategies of comprehension, vocabulary, *alphabetics,* and *fluency.* a. Use a range of strategies as they read including constant monitoring,	Students read and draw conclusions from texts, within a grade appropriate span of text complexity, (L) by applying their knowledge and strategies of comprehension, vocabulary, *alphabetics*, and *fluency*. a. Use a range of strategies as they read including constant monitoring,	Students read and make generalizations from texts, within a grade appropriate span of text complexity, (L) by applying their knowledge and strategies of comprehension, vocabulary, *alphabetics*, and *fluency*. a. Use a range of before, during, and after *reading strategies* to deepen their understanding of the author's message. (L)	Students read and make generalizations from texts, within a grade appropriate span of text complexity, (L) by applying their knowledge and strategies of comprehension, vocabulary, *alphabetics*, and *fluency*. a. Use a range of before, during, and after *reading strategies* to deepen their understanding of	Students read and make generalizations from texts, within a grade appropriate span of text complexity, (L) by applying their knowledge and strategies of comprehension, vocabulary, *alphabetics*, and *fluency*. a. Use a range of before, during, and after *reading strategies* to

searching, connecting, and inferring to deepen their understanding of the author's message. (L) b. Demonstrate ownership of appropriate vocabulary by effectively using a word in different modes and for different purposes. (L) c. Determine the meaning of unknown words by using a variety of strategies including using the *context* of the text, word connections, and a dictionary. (L) d. Use *phonics* including syllable types, *word parts*, word families and common *prefixes* and *suffixes* to read fluently and	searching, connecting, and inferring to deepen their understanding of the author's message. (L) b. Demonstrate ownership of appropriate vocabulary by effectively using a word in different modes and for different purposes. (L) c. Determine the meaning of unknown words by using a variety of strategies including applying knowledge of synonyms, antonyms, *homophones*, and homographs. (L) d. Use *phonics* including *word parts* and common *root words* to read	searching, connecting, and inferring to deepen their understanding of the author's message. (L) b. Demonstrate ownership of appropriate vocabulary by effectively using a word in different modes and for different purposes. (L) c. Determine the meaning of unknown words by using a variety of strategies including distinguishing and interpreting words with multiple meanings and using word, *context,* sentence, and paragraph *clues.* (L) d. Use *phonics* including *word*	b. Demonstrate ownership of appropriate vocabulary by effectively using a word in different modes and for different purposes. (L) c. Determine the meaning of unknown words by using a variety of strategies including *context*, definition, example, restatement, and how they compare/contrast to other words. (L) d. Use *phonics, word parts*, and word relationships when necessary to maintain fluency and meaning as they read. (L) e. Fluently and accurately read text, within a grade appropriate span of text complexity, using appropriate pacing, phrasing, intonation and	the author's message. (L) b. Demonstrate ownership of appropriate vocabulary by effectively using a word in different modes and for different purposes. (L) c. Determine the meaning of unknown words by using a variety of strategies including understanding and explaining that similar and related words can express different "shades" of meaning. (L) d. Use the origins and meanings of foreign words that are frequently used in English as they read. (L) e. Fluently and accurately read	deepen their understanding of the author's message. (L) b. Demonstrate ownership of appropriate vocabulary by effectively using a word in different modes and for different purposes. (L) c. Determine the meaning of unknown words by using a variety of strategies including the *connotative* and *denotative* meaning of words. (L) d. Use knowledge of Greek, Latin, and Anglo-Saxon *roots* and *word parts* to maintain fluency and meaning as they read

build meaning as they read. (L) e. Fluently and accurately read text, within a grade appropriate span of text complexity, using appropriate pacing, phrasing, intonation and expression. (L)	fluently and build meaning as they read. (L) e. Fluently and accurately read text, within a grade appropriate span of text complexity, using appropriate pacing, phrasing, intonation and expression. (L)	*parts* and less common *root words* to read fluently and build meaning as they read. (L) e. Fluently and accurately read text, within a grade appropriate span of text complexity, using appropriate pacing, phrasing, intonation and expression. (L)	expression. (L)	text, within a grade appropriate span of text complexity, using appropriate pacing, phrasing, intonation and expression. (L)	science, social studies, and mathematics texts. (L) e. Fluently and accurately read text, within a grade appropriate span of text complexity, using appropriate pacing, phrasing, intonation and expression. (L)

9-Diploma PERFORMANCE INDICATORS

Students read and evaluate texts, within a grade appropriate span of text complexity, by applying their knowledge and strategies of comprehension, vocabulary, *alphabetics,* and *fluency*. (L)

a. Use a flexible range of before, during, and after *reading strategies* to deepen their understanding of the author's message. (L)
b. Demonstrate ownership of appropriate vocabulary effectively using a word in different modes and for different purposes. (L)
c. Determine the meaning of unknown words by analyzing the *context* in which they are used, using reference sources, and applying knowledge of *word parts* and their meanings.
d. Pronounce and recognize foreign words, tier 3 words across all content areas, and specific literary terms to enhance comprehension of complex texts.
e. Fluently and accurately read text using appropriate pacing, phrasing, intonation and expression. (L)

A2 Literary Texts

PK-2 PERFORMANCE INDICATORS

Students read *fiction, nonfiction, drama,* and *poetry*, within a grade appropriate span of text complexity.

a. Identify and describe *settings* and *characters*.
b. Retell the sequence of events and include essential details.
c. Answer questions about information found directly in the text.
d. Read dramatic scripts with support.
e. Read a variety of *poems* with support.

Grade 3 PERFORMANCE INDICATORS	Grade 4 PERFORMANCE INDICATORS	Grade 5 PERFORMANCE INDICATORS	Grade 6 PERFORMANCE INDICATORS	Grade 7 PERFORMANCE INDICATORS	Grade 8 PERFORMANCE INDICATORS
Students read *fiction, nonfiction, drama,* and *poetry*, within a grade appropriate span of text complexity. a. Determine what characters are like by what they say or do and by how the author or illustrator portrays them. b. Explain the basic *plots* of classic fairy tales, myths, folktales, legends, and fables identifying the problem and solution. c. Identify the speaker in a selection to aid comprehension. d. Identify and	Students read *fiction, nonfiction, drama,* and *poetry,* within a grade appropriate span of text complexity. a. Use knowledge of the situation, setting, and a *character's* traits, motivations, and feelings to determine the causes for that *character's* actions. b. Identify the main events of the *plot* (including their causes and the effects of events on future actions) and the major *theme/s.* c. Define "Narrator" and identify the	Students read *fiction, nonfiction, drama,* and *poetry*, within a grade appropriate span of text complexity. a. Make inferences about *characters'* actions and explain how their behaviors affect the *plot* and/or *theme*. b. Summarize texts and select representative passages for support to identify the main problem or *conflict* and explain how it is resolved. c. Identify the speaker or	Students read *fiction, nonfiction, drama,* and *poetry*, within a grade appropriate span of text complexity, and analyze the characteristics noting how *structural features* and common *literary devices* help shape the reader's response. a. Describe external and internal *conflicts of the characters* and its effect on the *plot.* b. Analyze the influence of the setting on the problem and its resolution. c. Explain the difference between *first-*	Students read *fiction, nonfiction, drama,* and *poetry*, within a grade appropriate span of text complexity, and analyze the characteristics noting how *structural features* and common *literary devices* help shape the reader's response. a. Analyze an author's characterization techniques including the *character's* thoughts, words, and actions; the *narrator's* description; and the thoughts, words, and actions of other characters.	Students read *fiction, nonfiction, drama,* and *poetry*, within a grade appropriate span of text complexity, and analyze the characteristics, noting how *structural features* and common *literary devices* help shape the reader's response. a. Analyze the effect of the qualities of a *character* on the *plot* and on the resolution of the conflict. b. Evaluate the structural elements of the *plot*, such as subplots, parallel episodes, and climax; the *plot*'s

explain *literary devices* (L), including *similes* and exaggeration, to understand the text. e. Recognize *themes* that are explicitly stated in texts to aid comprehension. f. Explain why *poems* are different from other kinds of *fiction*.	*narrator* of a story. d. Identify and describe the effect of common *literary devices* on the reader, including *figurative language* and *symbolism*, to understand the text. e. Explain the *theme/s* of a literary work. f. Identify *rhyme, rhythm, alliteration*, and *onomatopoeia* in *poetry* to aid comprehension.	*narrator* in a selection and tell whether the speaker or narrator is a character involved in the story. d. Identify and define the function of *figurative language, diction,* and the use of *literary devices* including *symbolism*, to understand the text. e. Understand that *theme* refers to the central ideas or meaning of a selection and identify themes whether they are implied or stated directly. f. Identify and describe the function of common *literary devices* including *simile, alliteration*,	*person* and *third-person narration*. d. Explain the effects of common *literary devices* (L), including *imagery, symbolism,* or *metaphors* in a variety of fictional and literary nonfiction texts, to understand the text. e. Determine the *theme* of a selection, whether implied or stated directly. f. Identify how meaning is conveyed in poetry through *figurative language, rhythm, alliteration,* and *rhyme.*	b. Identify events that advance the *plot* and determine how each event explains past or present action or foreshadows future action. c. Contrast points of view including first person, third person, limited and omniscient in a literary text. d. Identify the relationship between the use of *literary devices* and a writer's style to understand the text. e. Compare how similar themes are presented in different works. f. Identify how meaning is conveyed in *poetry* through word choice, sentence structure, line length, and	development; and the way in which conflicts are (or are not) addressed and resolved. c. Explain how different points of view can affect the overall theme of the work. d. Analyze the *literary devices* that define a writer's style and use those elements to interpret the text. e. Identify and analyze recurring *themes* that appear frequently across traditional and contemporary works. f. Describe the use of *diction, figurative language,* repetition, *rhyme* and *tone* to convey meaning in *poetry*.

		idioms, simple *metaphors*, and *imagery* in *poetry*.		punctuation.	

9-Diploma PERFORMANCE INDICATORS

Students read text, within a grade appropriate span of text complexity, and present analyses of *fiction, nonfiction, drama,* and *poetry*, using excerpts from the text to defend their assertions.

a. Analyze the difference between *first- and third-person narration* and the effect of *point of view* on a reader's interpretation of a text.
b. Evaluate the *theme* or *themes*, whether explicitly stated or implied, in a literary text.
c. Identify and compare and analyze recurring themes across works.
d. Analyze external and internal *conflicts of characters*.
e. Determine the effects of common *literary devices* on the *style* and *tone* of a text.
f. Analyze how meaning is conveyed in *poetry* through *diction, figurative language*, repetition, and *rhyme*.
g. Compare types of *poetry*. (L)

A3 Informational Texts

PK-2 PERFORMANCE INDICATORS

Students read *informational texts*, within a grade appropriate span of text complexity, for different purposes.

a. Ask and answer relevant questions.
b. Restate facts from the text.
c. Follow one and two step written instructions.

Grade 3 PERFORMANCE INDICATORS	Grade 4 PERFORMANCE INDICATORS	Grade 5 PERFORMANCE INDICATORS	Grade 6 PERFORMANCE INDICATORS	Grade 7 PERFORMANCE INDICATORS	Grade 8 PERFORMANCE INDICATORS
Students read and summarize *informational texts*, within a grade appropriate span of	Students read, paraphrase, and summarize *informational texts*, within a grade	Students read, paraphrase, and summarize *informational texts*, within a grade	Students read various *informational texts*, within a grade appropriate span of text complexity,	Students read various *informational texts*, within a grade appropriate span of text complexity,	Students read multiple *informational texts*, within a grade appropriate span of text complexity,

text complexity, for different purposes. a. Generate questions, with support, that can be answered using *text features* and information found within the text. b. Use organizational *text features* including titles, tables of contents, chapter headings, a glossary, or an index to locate information. c. Demonstrate understanding by identifying answers in the text. d. Make and refine predictions about ideas in the text while reading. e. Follow simple two or three step written	appropriate span of text complexity, for different purposes. a. Create questions that can be answered by the text using *text features* and information found within the text. b. Use organizational *text features* including headings and sub-headings, bullets, and bold face to aid comprehension. c. Identify the *main idea* and details from the text to support the *main idea*. d. Draw conclusions about ideas as they are presented in the text. e. Follow four or more multiple step written	appropriate span of text complexity, for different purposes. a. Create and revise questions that can be answered by using *text features* and information found within the text. b. Use *text features* including diagrams, illustrations, charts and maps to aid comprehension. c. State the *main ideas* presented in texts and use evidence from the text to support those ideas. d. Distinguish between facts and opinions in text. e. Follow multiple step instructions related to a content area text	making decisions about usefulness based on purpose, noting how the *text structures* affect the information presented. a. Create and revise questions that can be answered by using *text structures* and information found within texts. b. Identify the *text structures* of informational publications including newspapers, magazines, and online sources and use them to obtain information. c. Identify and trace the development of an author's argument, *point of view*, or perspective to aid	making decisions about usefulness based on purpose, noting how the *text structures* affect the information presented. a. Create and revise questions that can be answered by using *text structures* and information found within texts. b. Analyze the amount of coverage and organization of ideas in varied informational materials. c. Draw conclusions about a text, and support them with evidence from the text. d. Compare information on the same topic in several passages or articles from	making decisions about usefulness based on purpose, noting how the *text structures* affect the information presented. a. Create and revise questions that can be answered by using *text structures* and information found within texts. b. Analyze difference in the structures and purposes of varied informational materials. c. Evaluate the appropriateness of the evidence presented for an author's conclusions and evaluate whether the author adequately supports inferences. d. Draw

directions.	instructions.	within a grade appropriate span of text complexity.	comprehension. d. Make reasonable statements and conclusions about the text and support them with evidence from the text. e. Follow multiple step instructions related to a content area text or technical manual within a grade appropriate span of text complexity.	different texts. e. Explain how to use a simple mechanical device by following directions in a technical manual.	conclusions about information from multiple texts and support them with evidence from the texts. e. Follow multiple step instructions to complete an application.

9-Diploma PERFORMANCE INDICATORS

Students evaluate the validity, truthfulness and usefulness of ideas presented in *informational texts*, within a grade appropriate span of text complexity, noting how the *text features* and *text structures* affect the information presented.

a. Evaluate the extent to which the author's conclusions can be logically drawn from the provided evidence.
b. Evaluate the data contained in tables, charts, graphics, etc. for accuracy, credibility, and relevancy.

A4 Persuasive Texts

PK-2 PERFORMANCE INDICATORS

No performance indicator.

Although no performance indicators are stated students are expected to have instructional experiences that help them to understand and explain that sometimes

authors write to convince readers of something.

Grade 3 PERFORMANCE INDICATORS	Grade 4 PERFORMANCE INDICATORS	Grade 5 PERFORMANCE INDICATORS	Grade 6 PERFORMANCE INDICATORS	Grade 7 PERFORMANCE INDICATORS	Grade 8 PERFORMANCE INDICATORS
Students read persuasive texts, within a grade appropriate span of text complexity, to analyze the persuasive writing. a. Identify the author's purpose. b. Identify the *main idea* and supporting details.	Students read persuasive texts, within a grade appropriate span of text complexity, to analyze the persuasive writing. a. Identify the central argument. b. Identify supporting details for the central argument. c. Recognize the difference between facts and opinions.	Students read persuasive texts, within a grade appropriate span of text complexity, to analyze the persuasive writing. a. Explicate the central argument by citing supporting evidence from the text. b. Recognize arguments for and against issues. c. Differentiate between facts and opinions.	Students evaluate the information in persuasive texts, within a grade appropriate span of text complexity, noting how the *text structures* and *rhetorical devices* affect the information and arguments presented in these texts. a. Recognize organizational patterns of compare/contrast to aid in comprehension. b. Identify the author's position or perspective. c. Distinguish among facts, supported inferences, and opinions. d. Summarize the author's position	Students evaluate the information in persuasive texts, within a grade appropriate span of text complexity, noting how the *text structures* and *rhetorical devices* affect the information and arguments presented in these texts. a. Recognize organizational patterns of proposition/support and problem/solution to aid in comprehension. b. Identify and use ways to detect bias. c. Identify problems with an author's use of figures of speech, logic, or reasoning	Students evaluate the information in persuasive texts, within a grade appropriate span of text complexity, noting how the *text structures* and *rhetorical devices* affect the information and arguments presented in these texts. a. Explain how organizational patterns such as compare/contrast, proposition/support, and problem/solution shape an author's argument. b. Analyze the author's perspective, noting instances of *bias, stereotyping* and

			or perspective.	d. Make reasonable judgments about a text through accurate, supporting evidence.	generalizations. c. Explain instances of propaganda and faulty reasoning. d. Evaluate positions presented and take a supported stand.

9-Diploma PERFORMANCE INDICATORS

Students evaluate the validity, truthfulness and usefulness of ideas presented in persuasive texts, within a grade appropriate span of text complexity, noting how the *text structures* and *rhetorical devices* affect the information and argument(s) presented.

a. Evaluate the logic of persuasive texts, noting instances of unsupported inferences and *fallacious reasoning*.
b. Identify and describe the effect of *figurative language* and other *rhetorical devices*; explain why they do or do not contribute to the overall effectiveness of the argument.
c. Recognize and explain the use and abuse in persuasive texts, of forms of nuance such as ambiguity, contradiction, irony and over-or-understatement.

B. WRITING: Students write to express their ideas and emotions, to describe their experiences, to communicate information, and to present or analyze an argument.

	PK – 2 *PERFORMANCE INDICATOR*	3-5 *PERFORMANCE INDICATOR*	6-8 *PERFORMANCE INDICATOR*	9-Diploma *PERFORMANCE INDICATOR*
B1 Interconnected Elements *(L) = Future Link to supporting information*	Students use a *writing process* to communicate their ideas. a. Select a focus for writing and develop an idea, including a beginning, middle and end. b. Respond to clarifying questions and suggested revisions. c. Edit, with assistance, for correct grammar, usage, and mechanics d. Create *legible* final drafts.	Students use a *writing process* with an emphasis on the development of a central idea, for a variety of audiences and purposes. a. Select a purpose for writing. b. Pre-write using graphic or other structures to organize their ideas. c. Establish an organizing structure and maintain a consistent focus. d. Include an introduction and conclusion. e. Write coherent paragraphs that have supporting sentences and a concluding sentence. f. Revise original drafts to improve coherence, provide better descriptive details, and to convey *voice*. g. Edit for correct grammar, usage and mechanics. h. Create *legible* final drafts.	Students use a *writing process* to communicate for a variety of audiences and purposes. a. Determine a purpose for writing. b. Decide which information to include to achieve the desired purpose. c. Revise drafts to improve focus and effect and *voice*, incorporating when appropriate *peer feedback*. d. Edit for correct grammar, usage and mechanics. e. Create writing to achieve a specific purpose. (L) f. Create *legible* final drafts.	Students use a *writing process* to develop an appropriate *genre*, exhibiting an explicit *organizational structure,* perspective and *style* to communicate with target audiences for specific purposes. a. Locate, summarize and synthesize information from *primary* and *secondary sources*, as necessary. b. Apply aspects of various *genres* for rhetorical effect, strong diction and distinctive voice. c. Revise drafts to improve synthesis of information from sources ensuring that the *organizational structure*, perspective and *style* are effective for the targeted audience and purpose. d. Edit for correct grammar, usage and mechanics. e. Create *legible* final drafts.

B2 Narrative	Students write stories that describe an experience. a. Include descriptive details that enable the reader to create mental images.	Students write *narratives* that relate events, ideas, observations, or recollections. a. Provide a context in a storyline that enables the reader to imagine the event or experience. b. Provide insight into why the selected event or experience is memorable. c. Include *sensory details*.	Students write *narratives* that convey complex ideas, observations, events, or reflections. a. Establish a *plot* (or other narrative structure), *point of view*, setting, and *conflict*. b. Develop *characters*. c. Use a range of *narrative strategies* for effect. d. Use *stylistic devices* to clarify, enhance and develop ideas.	Students embed *narrative* writing in a written text when appropriate to the audience and purpose a. Use *diction, syntax, imagery*, and *tone* to create a distinctive *voice*. b. Organize ideas in a logical sequence, with effective transitions.
B3 Argument/ Analysis Expository (*L*) = *Future Link to supporting information*	Students write to inform on a specific topic. a. Write brief descriptions of objects, people, places or events. b. Record, in writing, and share information gathered.	Students write to identify and explain a position to an identified audience. a. Summarize information from reading, listening or viewing. b. Discuss a central question or idea by using relevant supporting facts and details.	Students write *academic essays* that state a clear position, supporting the position with relevant evidence. a. Summarize and paraphrase and/or explain information from reading, listening or viewing. b. Write thesis-driven essays that build a logical argument excluding extraneous information and differentiating between facts and opinions.	Students write *academic essays* that structure ideas and arguments in a sustained and logical fashion. a. Explain and evaluate information from reading, listening or viewing. b. Write thesis-driven essays that build a logical argument and support assertions with examples and evidence that are accurate, credible, and relevant.

B4 Persuasive Expository	Students write to explain likes and dislikes. a. Support opinions with examples.	Students write to persuade a targeted audience. a. Establish a clear position on a topic and support the position with relevant evidence.	Students write *persuasive essays* addressed to a specific audience for a particular purpose. a. Employ a variety of persuasive techniques, including presenting alternate views objectively or addressing potential counterclaims in a thesis-driven essay to influence the opinion, belief, or position of others.	Students write *persuasive essays* exhibiting logical reasoning and rhetorical techniques. a. Employ a variety of persuasive techniques including anticipating, addressing and refuting potential counterclaims in a thesis-driven logical argument to influence the opinion, belief, or position of others.
B5 Practical Application *(L) = Future Link to supporting information*	Students convey simple needs in writing. a. Write a personal letter. b. Complete simple informational forms. c. Write one and two step directions for completing a simple task.	Students write letters, other requests for information or directions for completing a process. a. Include date, when appropriate an inside address, salutation, body, closing, and signature when writing a letter. b. Write multiple step directions for completing a task.	Students write documents related to career development and simple business letters and job applications. a. Present information purposefully and succinctly to meet the needs of the audience. b. Convey specific requests for detailed information. c. Follow a conventional format such as for resumes, memoranda, and proposals. d. Write multiple step directions with annotation where appropriate, for completing a task.	Students write personal communication and pieces related to educational development, career issues, and civic participation. a. Complete college, job, licensing, and scholarship applications. b. Request information. c. Write editorials.

C. RESEARCH: Students engage in inquiry by developing research questions, accessing and verifying a variety of *sources*, communicating findings, and applying the conventions of documentation. Students present findings orally, in writing, or using mixed media. (L)

	PK – 2 *PERFORMANCE INDICATOR*	*3-5* *PERFORMANCE INDICATOR*	*6-8* *PERFORMANCE INDICATOR*	*9-Diploma* *PERFORMANCE INDICATOR*
C1 Research *(L) = Future Link to supporting information*	Students answer research questions by gathering information from text and *non-print sources*. a. Follow an established procedure for locating sources appropriate to reading level. b. Collect information for a specific purpose. c. Organize findings. d. Share information gathered using oral and visual examples.	Students create, identify and answer research questions by gathering information from *print and non-print sources* and document sources and communicate findings. a. Identify key words and concepts related to research questions making adjustments when appropriate. b. Locate and access information by using *organizational features*. c. Collect, evaluate and organize information for a specific purpose. d. Communicate findings using a variety of *print and non-print sources*. e. Understand plagiarism and demonstrate appropriate *citation*.	Students propose and revise research questions, collect information from a wide variety of *primary and/or secondary sources* and follow the conventions of documentation to communicate findings. a. Determine the nature and extent of information needed. b. Locate and access relevant information. c. Demonstrate facility with note-taking, organizing information, and creating bibliographies. d. Distinguish between *primary and secondary sources*. e. Evaluate and verify the credibility of the information found in *print and non-print sources.* f. Use additional sources to resolve contradictory information. g. Summarize and interpret information presented in various sources, and/or from fieldwork, experiments,	Students develop research questions and modify them as necessary to elicit, present and critique evidence from a variety of *primary and secondary sources* following the conventions of documentation. a. Select and apply research methods that suit the purpose of the inquiry. b. Make judgments about conflicting sources, incorporating those that are valid and refuting others. c. Synthesize information from multiple sources, and/or data gathered from fieldwork and interviews. d. Utilize media relevant to audience and purpose, that extend and support oral, written, and visual communication.

			and interviews. h. Present findings paraphrasing and quoting sources, and using proper *citation*. i. Use information ethically and legally.	e. Integrate paraphrasing, quotations and *citations* into a written text that maintains the flow of ideas. f. Access and present information ethically and legally.

D. LANGUAGE: Students write and speak using the conventions of *Standard American English*. They apply knowledge of grammar and usage when reading to aid comprehension. They know and apply rules of mechanics and spelling to enhance the effectiveness and clarity of communication.

	PK – 2 *PERFORMANCE INDICATOR*	*3-5* *PERFORMANCE INDICATOR*	*6-8* *PERFORMANCE INDICATOR*	*9-Diploma* *PERFORMANCE INDICATOR*
D1 Grammar and Usage *(L) = Future Link to supporting information*	Students demonstrate an understanding of the parts of speech and simple sentence structures to communicate. a. Identify and use nouns and verbs correctly. b. Use simple sentences. (L for developmental progression of expectations)	Students use the parts of speech, and vary sentence structure to communicate. a. Use forms of nouns, verbs, adjectives, adverbs, prepositions, conjunctions, pronouns, and interjections correctly. (L) b. Use simple, compound, and complex sentences. (L)	Students manipulate the parts of speech effectively and employ a variety of sentence structures to communicate. a. Use forms of nouns, pronouns, verbs, adjectives and their modifiers, adverbs, prepositions, transitions, conjunctions and interjections correctly. (L) b. Use compound complex sentences. c. Use active and passive voices effectively.	Students apply rhetorical skills when reading, writing and speaking through their understanding of *Standard American English*. a. Use appropriate *diction, syntax* and *figurative language* to suit purpose, context, and audience.
D2 Mechanics	Students apply the rules of capitalization, punctuation and spelling to	Students apply the rules of capitalization, punctuation and spelling to communicate.	Students apply the rules of capitalization, punctuation and spelling to communicate	Students demonstrate the use of the structures and conventions of *Standard*

(L) = Future Link to supporting information	communicate. a. Use commas in the greeting and closure of a letter and in dates. b. Capitalize proper nouns and words at the beginning of sentences. c. Use periods, question marks and exclamation points. d. Spell high frequency grade-level words. Use *phonics* patterns to aid in spelling. (L)	a. Punctuate correctly. (L) b. Capitalize correctly. (L) c. Spell high frequency grade level words.	effectively. a. Use correct capitalization and punctuation to include commas and semi-colons. b. Correctly spell frequently misspelled words and common *homophones*.	*American English* in their communication. a. Use appropriate punctuation, spelling, sentence and paragraph structure to suit purpose, *context,* and audience.

E. LISTENING AND SPEAKING: Students listen to comprehend and speak to communicate effectively.

	PK – 2 *PERFORMANCE INDICATOR*	3-5 *PERFORMANCE INDICATOR*	6-8 *PERFORMANCE INDICATOR*	9-Diploma *PERFORMANCE INDICATOR*
E1 Listening *(L) = Future* *Link to supporting information*	Students use early active listening skills. a. Ask relevant questions at appropriate times. b. Converse without interrupting. c. Follow one- and two-step oral instructions.	Students apply active listening skills. a. Attend and respond appropriately to classmates and adults. b. Ask clarifying questions. c. Follow multiple step oral instructions.	Students adjust listening strategies to understand formal and informal discussion, debates or presentations, and then apply the information. a. Ask appropriate clarifying questions. b. Summarize and apply information presented. c. Acknowledge and build upon the ideas of others.	Students adjust listening strategies to formal and informal discussion, debates or presentations, and then evaluate the information. a. Formulate clarifying questions. b. Examine and critique information presented. c. Expand on ideas presented by others.
E2 Speaking *(L) = Future* *Link to supporting information*	Students use speaking skills to communicate. a. Make clear requests at appropriate times. b. Make simple presentations using eye contact. c. Use voice level appropriate to the situation. d. Share stories and information and support opinions	Students use active speaking skills to communicate effectively in a variety of contexts. a. Explain ideas clearly and respond to questions with appropriate information. b. Share information summarized from reading, listening, or viewing and form a position on a topic supported with a variety of *print and non-print sources*. c. Speak using eye contact,	Students adjust speaking strategies for formal and informal discussions, debates or presentations appropriate to the audience and purpose. a. Organize and present information logically. b. Adjust volume, tone, eye contact, and gestures to suit the audience. c. Use conventions of *Standard American English*. d. Seek feedback and revise to	Students determine speaking strategies for formal and informal discussions, debates, or presentations appropriate to the audience and purpose. a. Choose and present appropriate information logically. b. Apply conventions of *Standard American English* to suit audience and

	using oral and visual examples.	clear enunciation, and gestures for emphasis and appropriate volume and rate.	improve effectiveness of communication. e. Select appropriate media, relevant to audience and purpose, that extend and supports oral, written, and visual communication.	purpose. c. Analyze feedback and revise to improve effectiveness of communication. d. Determine appropriate media, relevant to audience and purpose, that extend and support oral, written, and visual communication.

F. MEDIA: Students recognize and can explain the effects that both *print and non-print sources* have on listeners, viewers and readers, in order to develop an awareness of the effects that the media have on forming opinions and making decisions.

	PK – 2 *PERFORMANCE INDICATOR*	3-5 *PERFORMANCE INDICATOR*	6-8 *PERFORMANCE INDICATOR*	9-Diploma *PERFORMANCE INDICATOR*
F1 Analysis of Media *(L) = Future Link to supporting information*	Students understand that there are differences among the kinds of information in different forms of media. a. Identify the different types of media in the daily lives of most people. b. Describe their reactions to a variety of *print and/or non-print source.*	Students explain that the same information can have different effects when presented through different forms of media. a. *Compare* the effects of the same kind of information found in books, movies, newspapers, magazines, and on the Internet and television. b. Recognize that there are multiple roles and purposes of media.	Students identify the various purposes, techniques, and/or effects used to communicate auditory, visual, and written information found in different forms of media. a. Describe and evaluate the *test structures* of visual and non-visual media. (L) b. Explain the role of the media in shaping opinions. c. Note instances of *bias, stereotyping,* and *propaganda*.	Students analyze the effectiveness of auditory, visual, and written information used to communicate in different forms of media. a. Explain how visual and sound effects influence messages in various media. b. Explain the similarities and differences between the messages conveyed

				by *print and non-print sources*. c. Compare the role of *print and non-print sources*, including advertising, in shaping public opinion noting instances of unsupported inferences, or *fallacious reasoning*. d. Determine appropriate media, relevant to audience and purpose, that extend and support oral, written, and visual communication.

HEALTH EDUCATION AND PHYSICAL EDUCATION

The Health Education and Physical Education Standards and performance indicators represent the essential knowledge and skills students need to be healthy individuals. Every day, students make decisions affecting their health and well-being: what foods to eat; what company to keep; what risks to take; what to do for exercise. These decisions often lead to habits that stay with them throughout life. The Health Education and Physical Education Standards can help students make better decisions about their health. They learn that their decisions can affect their health and set a pattern for their lives. Students learn to protect their health by acquiring good information, by seeking good advice and friendships, and by taking responsibility for their own health.

Health education gives students the knowledge and skills to thrive physically, mentally, emotionally, and socially. It contributes to students' ability to successfully practice behaviors that protect and promote health and avoid and reduce health risks. Health education helps students to determine personal values and group norms that support healthy behaviors. Through comprehensive health education, students learn basic health concepts and influences on health. They develop the skills required to adopt, practice and maintain health-enhancing and safe behaviors. These skills include: analyzing the reliability and validity of media and health resources, communicating effectively using refusal and conflict management skills and setting goals and making healthy decisions. Health education helps students to: be better consumers of information, manage stress, and make healthy decisions in the face of conflicting messages. It assists them in living healthier lives.

Physical education provides students with the skills needed to participate in a wide variety of physical activities throughout their lives and the knowledge to improve these skills that lead to an active lifestyle. It gives them building blocks for skill development, skill analysis, physical fitness, stress reduction, improved judgment and positive social skills. Students learn to assess and evaluate their own physical fitness and use the knowledge to maintain or improve their current fitness level. Students who participate in physical education on a regular basis learn the benefits of physical activity and value its contribution to a healthy lifestyle.

OUTLINE OF HEALTH EDUCATION AND PHYSICAL EDUCATION STANDARDS AND PERFORMANCE INDICATORS

A. Health Concepts
   1. Healthy Behaviors and Personal Health
   2. Dimensions of Health
   3. Diseases/Other Health Problems
   4. Environment and Personal Health
   5. Growth and Development
   6. Basic Health Concepts

B. Health Information, Services and Products
   1. Validity of Resources
   2. Locating Health Resources

C. Health Promotion and Risk Reduction
   1. Healthy Practices and Behaviors
   2. Avoiding/Reducing Health Risks

3. Self-Management

D. Influences on Health
1. Influences On Health Practices/Behaviors
2. Technology and Health
3. Compound Effect Of Risky Behavior

E. Communication and Advocacy Skills
1. Interpersonal Communication Skills
2. Advocacy Skills

F. Decision Making and Goal Setting Skills
1. Decision Making
2. Goal Setting
3. Long Term Health Plan

G. Movement/Motor Skills and Knowledge
1. Stability and Force
2. Movement Skills
3. Skill-Related Fitness
4. Practice for Skill Improvement

H. Physical Fitness Activities and Knowledge
1. Fitness Assessment
2. Fitness Plan
3. Fitness Activity
4. Physical Activity Benefits

I. Personal and Social Skills and Knowledge
1. Cooperative Skills
2. Responsible Behavior
3. Safety and Playing Rules

A. Health Concepts: Students comprehend concepts related to health promotion and disease prevention to enhance health.

	PK – 2 *PERFORMANCE INDICATOR*	3-5 *PERFORMANCE INDICATOR*	6-8 *PERFORMANCE INDICATOR*	9-Diploma *PERFORMANCE INDICATOR*
A1 Healthy Behaviors and Personal Health	Students recognize that healthy behaviors impact personal health.	Students explain the relationship between healthy behaviors and personal health.	Students examine the relationship between behaviors and personal health. a. Explain the importance of assuming responsibility for personal health. b. Examine the relationship between healthy and unhealthy behaviors and personal health. c. Identify the possible barriers to practicing healthy behaviors.	Students predict how behaviors can impact health status. a. Analyze individual responsibility for enhancing health. b. Predict how healthy behaviors can positively impact health status. c. Describe barriers to practicing healthy behaviors. d. Examine *personal susceptibility* to, and the *potential severity* of, injury or illness if engaging in unhealthy behaviors.
A2 Dimensions of Health	Students recognize that there are multiple *dimensions of health*.	Students identify examples of *physical, mental, emotional*, and *social health* during childhood.	Students explain the interrelationship of *physical, mental/intellectual, emotional*, and *social health*.	Students analyze the interrelationship of *physical, mental/intellectual, emotional,* and *social health*.
A3 Diseases/Other Health	Students describe the transmission and prevention of common	Students describe ways to detect and treat common childhood diseases and other health problems	Students identify causes of common adolescent diseases and other health problems and	Students explain causes of common diseases, disorders and other

	PK – 2 *PERFORMANCE INDICATOR*	3-5 *PERFORMANCE INDICATOR*	6-8 *PERFORMANCE INDICATOR*	9-Diploma *PERFORMANCE INDICATOR*
Problems	childhood communicable diseases.		describe ways to reduce, prevent or treat them.	common health problems and propose ways to reduce, prevent or treat them.
A4 Environment and Personal Health	Students describe ways a safe and healthy school *environment* can promote personal health.	Students describe ways a safe and healthy school and community *environment* can promote personal health.	Students determine how *environment* and other factors impact personal health. a. Analyze how *environment* impacts personal health. b. Describe how *family history* can impact personal health. c. Explain how appropriate health care can promote personal health.	Students determine the interrelationship between the *environment* and other factors and personal health. a. Analyze how environment and personal health are interrelated. b. Describe how *genetics* and *family history* can impact personal health. c. Analyze the relationship between access to health care and health status.
A5 Growth and Development	No performance indicator.	Students identify the characteristics of human growth and development.	Students describe the characteristics of adolescent human growth and development.	Students describe the characteristics of human growth and development throughout the various stages of life.

A6 Basic Health Concepts	Students identify basic health terms related to family life, nutrition, personal health, safety, and injury prevention, and tobacco, alcohol and other drug use prevention.	Students describe basic health concepts related to family life, nutrition, personal health, safety and injury prevention, and tobacco, alcohol and other drug use prevention.	Students explain fundamental health concepts related to family life, nutrition, personal health, safety and injury prevention, and tobacco, alcohol and other drug use prevention.	Students analyze complex health concepts related to family life, nutrition, personal health, safety and injury prevention, and tobacco, alcohol and other drug use prevention.

B. Health Information, Services and Products: Students demonstrate the ability to access valid health information, products, and services to enhance health.

	PK – 2 *PERFORMANCE INDICATOR*	3-5 *PERFORMANCE INDICATOR*	6-8 *PERFORMANCE INDICATOR*	9-Diploma *PERFORMANCE INDICATOR*
B1 Validity of Resources	Students identify trusted adults and professionals who can help promote health.	Students identify characteristics of *valid health information, products, and services*.	Students analyze the *validity of health information, products, and services.*	Students evaluate the *validity* and accessibility *of health information, products, and services*.
B2 Locating Health Resources	Students identify ways to locate school and community health helpers.	Students locate resources from home, school, and community that provide *valid health information*.	Students locate *valid* and reliable *health information, products, and services.* a. Explain situations requiring the use of *valid* and reliable *health information, products, and services*. b. Locate *valid* and reliable *health information, products, and services.*	Students access *valid* and reliable *health information, products, and services*. a. Determine when professional health services may be required. b. Access *valid* and reliable *health information, products, and services.*

C. Health Promotion and Risk Reduction: Students demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

	PK – 2 *PERFORMANCE INDICATOR*	3-5 *PERFORMANCE INDICATOR*	6-8 *PERFORMANCE INDICATOR*	9-Diploma *PERFORMANCE INDICATOR*
C1 Healthy Practices and Behaviors	Students demonstrate age-appropriate healthy practices to maintain or improve personal health. a. Choose healthy foods. b. Demonstrate personal hygiene skills, including hand-washing.	Students demonstrate a variety of age-appropriate healthy practices and behaviors to maintain or improve personal health. a. Design healthy menus. b. Demonstrate basic care of the human body.	Students demonstrate a healthy practice and behavior to maintain or improve their own health in the following areas: healthy eating, physical activity, and the prevention of the use of tobacco, alcohol and drugs.	Students demonstrate a variety of healthy practices and behaviors to maintain or improve the health of self and others in the following areas: healthy eating, physical activity, the prevention of the use of tobacco, alcohol and drugs, and prevention of STDs, HIV and unintended pregnancy.
C2 Avoiding /Reducing Health Risks	Students demonstrate behaviors to avoid or reduce health risks. a. Demonstrate a variety of safety skills for different situations. b. Differentiate between safe and harmful substances found at home and school. c. Recognize basic signs, symbols and warning labels for	Students demonstrate a variety of behaviors to avoid or reduce health risks. a. Demonstrate healthful and safe ways to recognize, and deal with or avoid threatening situations. b. Develop injury prevention and safety strategies for personal health.	Students demonstrate behaviors to avoid or reduce health risks to self and others. a. Demonstrate ways to recognize and avoid or change situations that threaten the safety of self and others. b. Develop injury prevention and response strategies including first aid for personal and family health.	Students demonstrate a variety of behaviors to avoid or reduce health risks to self and others. a. Develop ways to recognize and avoid or change situations that threaten the safety of self and others. b. Develop injury prevention strategies including first aid and response strategies for personal, family,

	health and safety.			and community health.
C3 Self-Management	Students demonstrate coping strategies when feeling too excited, anxious, upset, angry, or out of control.	Students demonstrate strategies to manage stress, anger, and grief.	Students distinguish between healthy and unhealthy strategies for stress, anger, and grief management.	Students design, implement, and evaluate a plan for stress management.

D. Influences on Health: Students analyze the ability of family, peers, culture, media, technology, and other factors to enhance health.

	PK – 2 *PERFORMANCE INDICATOR*	3-5 *PERFORMANCE INDICATOR*	6-8 *PERFORMANCE INDICATOR*	9-Diploma *PERFORMANCE INDICATOR*
D1 Influences on Health Practices/ Behaviors	Students identify influences on personal health practices and behaviors. a. Identify family influences on personal health practices and behaviors. b. Identify what the school can do to support personal health practices and behaviors. c. Describe how the media can influence health behaviors.	Students describe how a variety of factors influence personal health behaviors. a. Describe how family, school and community influence and support personal health practices and behaviors. b. Identify how peers and *culture* can influence health practices and behaviors. c. Explain how media influences thoughts, feelings, and health behaviors.	Students analyze the influences on adolescent health behaviors. a. Examine how the family, school and community influence the health behaviors of adolescents. b. Describe how peers influence healthy and unhealthy behaviors. c. Analyze how messages from media influence health behaviors. d. Explain how the *perceptions of norms* influence healthy and unhealthy behaviors. e. Explain how *culture* and personal values and beliefs influence individual health behaviors.	Students analyze the influences on health and health behaviors. a. Analyze how family, school and community influence the health of individuals. b. Analyze how peers influence healthy and unhealthy behaviors. c. Evaluate the effect of the media on personal and family health. d. Analyze how the perceptions of norms influence healthy and unhealthy behaviors.

				e. Analyze how *culture* and personal values and beliefs influence individual health behaviors. f. Investigate how public health policies and government regulations can influence health promotion and disease prevention.
D2 Technology and Health	No performance indicator.	Students describe ways technology can influence personal health.	Students analyze the influence of technology on personal and family health.	Students evaluate the impact of technology on personal, family, and community health.
D3 Compound Effect of Risky Behavior	No performance indicators	No performance indicator.	Students describe how some health risk behaviors can influence the likelihood of engaging in unhealthy behaviors. a. Describe how *gateway drugs* can lead to the use of other drugs. b. Describe the influence of alcohol and other drug use on judgment and self control.	Students analyze how some health risk behaviors can influence the likelihood of engaging in unhealthy behaviors. a. Analyze the influence of alcohol use on individual and group behavior. b. Analyze the influence of drug use on individual and group behavior.

E. Communication and Advocacy Skills: Students demonstrate the ability to use communication skills to enhance and advocate for personal, family, and community health.

	PK-2 *PERFORMANCE INDICATOR*	3-5 *PERFORMANCE INDICATOR*	6-8 *PERFORMANCE INDICATOR*	9-Diploma *PERFORMANCE INDICATOR*
E1 Interpersonal Communication Skills	Students demonstrate healthy ways to communicate. a. Demonstrate healthy ways to express needs, wants, and feelings. b. Distinguish between verbal and nonverbal communication. c. Make requests to promote personal health. d. Demonstrate listening skills to enhance health. e. Demonstrate ways to respond to an unwanted, threatening, or dangerous situation including telling a trusted adult if threatened or harmed.	Students demonstrate effective verbal and nonverbal *interpersonal communication* skills to enhance health. a. Demonstrate appropriate listening skills to enhance health. b. Demonstrate effective verbal and non-verbal communication skills, including assertiveness skills, to enhance health. c. Demonstrate how to ask for assistance to enhance personal health. d. Demonstrate refusal skills to avoid or reduce health risks. e. Demonstrate non-violent strategies to manage or resolve conflict.	Students apply effective verbal and nonverbal *interpersonal communication* skills to enhance health. a. Demonstrate communication skills to build and maintain healthy relationships. b. Demonstrate effective communication skills, including how to ask for assistance to enhance the health of self and others. c. Demonstrate refusal and negotiation skills to avoid or reduce health risks. d. Demonstrate effective conflict management or resolution strategies.	Students utilize skills for communicating effectively with family, peers, and others to enhance health. a. Demonstrate effective communication skills, including how to ask for and offer assistance to enhance the health of self and others. b. Demonstrate refusal, negotiation, and collaboration skills to enhance health and avoid and reduce health risks. c. Demonstrate strategies to prevent, manage, or resolve interpersonal conflicts without harming self or others.

	PK – 2 *PERFORMANCE INDICATOR*	3-5 *PERFORMANCE INDICATOR*	6-8 *PERFORMANCE INDICATOR*	9-Diploma *PERFORMANCE INDICATOR*
E2 Advocacy Skills	Students encourage peers to make positive health choices.	Students encourage others to make positive health choices. a. Express opinions and give accurate information about health issues.	Students describe ways to influence and support others in making positive health choices. a. State a health enhancing position on a topic and support it with information. b. Design health-enhancing messages using communication techniques that target a specific audience. c. Work cooperatively as an advocate for healthy individuals, families and schools.	Students demonstrate ways to influence and support others in making positive health choices. a. Utilize accurate peer and societal norms to formulate a health-enhancing message. b. Adapt health messages and communication techniques for different audiences. c. Work cooperatively as an advocate for improving personal, family, and community health.

F. Decision Making and Goal Setting Skills: Students demonstrate the ability to make decisions and set goals to enhance health.

	PK – 2 PERFORMANCE INDICATOR	*3-5 PERFORMANCE INDICATOR*	*6-8 PERFORMANCE INDICATOR*	*9-Diploma PERFORMANCE INDICATOR*
F1 Decision Making	Students identify situations where a health-related decision is needed. a. Differentiate between two situations to explain when health-related decisions can appropriately be made by the individual and when assistance is needed.	Students apply decision making steps to enhance health. a. Identify health-related situations that might require a particularly thoughtful decision. b. List healthy options to health-related issues or problems. c. Predict the potential outcomes of each option when making a health-related decision. d. Choose a healthy option when making a decision. e. Describe the outcomes of a health-related decision.	Students apply decision making skills to enhance health. a. Determine when health-related situations require the application of a thoughtful decision making process. b. Distinguish when individual or collaborative *decision making* is appropriate. c. Distinguish between healthy and unhealthy alternatives to health-related issues or problems. d. Predict the potential short-term impact of alternative decisions for themselves and others. e. Choose healthy alternatives over unhealthy alternatives when making a decision. f. Analyze the outcomes of a health-related decision.	Students apply a decision making process to enhance health. a. Compare the value of thoughtful *decision making* to quick *decision making* in health related situation. b. Justify when individual or collaborative *decision making* is appropriate. c. Generate alternative approaches to situations involving health-related decisions. d. Predict the potential short and long-term impact for and others for each alternative. e. Defend the healthy choice when making a decision. f. Evaluate the effectiveness of a health-related decision.

	PK – 2 *PERFORMANCE INDICATORS*	3 – 5 *PERFORMANCE INDICATORS*	6 – 8 *PERFORMANCE INDICATORS*	9 – Diploma *PERFORMANCE INDICATORS*
F2 Goal Setting	Students identify a short-term personal health goal and take action toward achieving the goal.	Students utilize *goal setting* skills to implement a short-term personal health goal. a. Set a short-term health goal. b. Identify resources to assist in achieving a personal health goal. c. Track progress toward achieving the goal.	Students develop and apply strategies and skills to attain a short-term personal health goal. a. Assess personal health practices. b. Develop a short-term goal to adopt, maintain, or improve a personal health practice. c. Develop and apply strategies to attain the goal. d. Monitor progress toward the goal. e. Describe how personal health goals can vary with changing abilities, priorities, and responsibilities.	Students develop and analyze a plan to attain a personal health goal. a. Assess personal health practices and overall health status. b. Develop a plan to attain a short-term personal health goal that addresses strengths, needs, and risks. c. Implement strategies and monitor progress in achieving a personal health goal.
F3 Long Term Health Plan	No performance indicator.	No performance indicator.	No performance indicator.	Students formulate an effective long-term personal health plan.

G. Movement/Motor Skills and Knowledge: Students demonstrate the fundamental and *specialized movement skills* and apply movement principles for continued improvement.

	PK – 2 *PERFORMANCE INDICATOR*	3-5 *PERFORMANCE INDICATOR*	6-8 *PERFORMANCE INDICATOR*	9-Diploma *PERFORMANCE INDICATOR*
G1 Stability and Force *Future Link to Effective instruction to develop these performance indicators.*	Students demonstrate positions to create stability and force. a. Show how base of support changes during static balances. b. Demonstrate how push and pull affect balance.	Students demonstrate a variety of movements that apply stability and force. a. Demonstrate movements that change the center and line of gravity during dynamic balances. b. Show how increasing speed and mass can change the force on an object. c. Demonstrate how body position can change to absorb force.	Students change their motion and the motion of objects by applying the principles of stability and force during skill practice. a. Demonstrate the principle of opposition. b. Demonstrate how the point of contact changes the path of an object. c. Demonstrate how the point of release changes the path of an object.	Students change their motion and the motion of objects by applying the principles of stability and force to modify their performance in games/physical activities. a. Demonstrate how spin and rebound affect the motion of an object. b. Use the principle of opposition, and point of contact, and point of release to change the path of an object during a game/physical activity. c. Change movements to accommodate external forces that influence performance.

	PK – 2 *PERFORMANCE INDICATOR*	3-5 *PERFORMANCE INDICATOR*	6-8 *PERFORMANCE INDICATOR*	9-Diploma *PERFORMANCE INDICATOR*
G2 Movement Skills *Future Link regarding the use and instruction of non-locomotor skills and manipulatives*	Students demonstrate a variety of *locomotor skills*. a. Demonstrate correct technique for a variety of *locomotor skills*. b. Demonstrate a *locomotor skill* using change in direction, level, and pathway. c. Demonstrate combinations of *locomotor skills*.	Students demonstrate a variety of *locomotor skills* and *manipulative skills*. a. Demonstrate correct technique for a variety of *manipulative skills.* b. Demonstrate combinations of *locomotor skills* with *manipulative skills* using change in direction, level, or pathway.	Students demonstrate *motor skills* and *manipulative skills* during drills or modified games/physical activities. a. Demonstrate the correct technique for *motor skills* and *manipulative skills* during drills or modified games/physical activities. b. Combine *manipulative skills* with *motor skills* during drills or modified games/physical activities.	Students demonstrate a variety of *specialized movement skills* specific to a game/physical activity while participating in a game/physical activity.
G3 Skill-Related Fitness	Students identify the skill-related fitness components of balance and coordination.	Students identify the skill-related fitness components of balance, agility, speed, and coordination.	Students describe the following skill-related fitness components of balance, agility, speed, and coordination, and power.	Students explain the relationship of skill-related fitness to *specialized movement skills*.
G4 Practice for Skill Improvement	No performance indicator. Although no performance indicators are stated students are expected to have instructional experiences that help them to understand the importance of practice.	Students describe why practice is important to skill improvement.	Students explain how specific, positive, and correct feedback affects skill improvement.	Students design appropriate practice sessions, utilizing fundamental movement skills to improve performance.

H. Physical Fitness Activities and Knowledge: Students demonstrate and apply *health-related fitness concepts*.

	PK – 2 *PERFORMANCE INDICATOR*	3-5 *PERFORMANCE INDICATOR*	6-8 *PERFORMANCE INDICATOR*	9-Diploma *PERFORMANCE INDICATOR*
H1 Fitness Assessment	No performance indicators.	Students participate in *health-related fitness assessments* and reassess to observe changes.	Students conduct a *health-related fitness assessment* and use the information to establish personal fitness goals.	Students conduct a *health-related fitness assessment* to analyze personal fitness, establish personal fitness goals, and reassess their fitness over time.
H2 Fitness Plan	Students identify components of health-related fitness.	Students describe and give examples of the five *health-related fitness components*.	Students design a fitness program from established goals which addresses the five *health-related fitness component*s and applies the frequency, intensity, time and type *(FITT) principle*.	Students design and critique a personal fitness plan from established goals that applies the five *health-related fitness components* and the *principles of training* related to specificity, overload, and progression.
H3 Fitness Activity *Future Link to the importance of accurate performance*	Students participate in activities to introduce the *health-related fitness components* of *flexibility, cardiovascular endurance, muscular endurance, and muscular strength*.	Students participate in activities that address each of the five *health-related fitness components including flexibility, cardiovascular endurance, muscular endurance, muscular strength, and body composition*.	Students participate in activities that address their personal fitness goals for each of the five *heath-related fitness components* including *flexibility, cardiovascular endurance, muscular endurance, muscular strength, and body composition*.	Students select and participate in activities that address their personal fitness plans that apply to the five *health-related fitness components*.
H4 Physical Activity Benefits	Students identify the physical benefits and body responses related to physical activities.	Students identify physical and mental benefits and body responses related to regular participation in physical activity.	Students describe physical, mental/intellectual, emotional and social benefits and physiological responses related to regular participation in physical activity.	Students explain the interrelationship of physical, mental/intellectual, emotional, and social benefits and physiological

				responses related to regular participation in physical activity.

I. Personal and Social Skills and Knowledge: Students demonstrate and explain responsible personal and social behavior in physical activity settings.

	PK - 2 *PERFORMANCE INDICATOR*	3 – 5 *PERFORMANCE INDICATOR*	6 – 8 *PERFORMANCE INDICATOR*	9 – Diploma *PERFORMANCE INDICATOR*
I1 Cooperative Skills	Students demonstrate taking turns and sharing while participating in physical activities.	Students demonstrate cooperative skills while participating in physical activities. a. Demonstrate active listening. b. Get along with others. c. Accept responsibility for personal behavior.	Students demonstrate cooperative and inclusive skills while participating in physical activities. a. Work together as a team. b. Respond appropriately to peer pressure. c. Manage conflict d. Invite differently abled youngsters to participate.	Students demonstrate collaborative skills while participating in physical activities. a. Accept constructive feedback. b. Give constructive feedback. c. Include differently abled youngsters.
I2 Responsible Behavior	Students follow procedures for safe behaviors while participating in physical activities.	Students demonstrate safe behaviors and proper equipment use while participating in physical activities.	Students demonstrate responsible personal behaviors while participating in physical activities.	Students demonstrate responsible and ethical behavior while participating in physical activities.
I3 Safety and Playing Rules	Students identify safety and playing rules for games/physical activities.	Students describe safety and playing rules for games/physical activities.	Students describe game/physical activity rules and safety rules, and their purposes. a. Explain the purposes for modifying playing rules in	Students predict how rules/etiquette improves games/activities. a. Explain how rules and etiquette

			specified situations. b. Explain the safety rules and possible risks associated with specific games/physical activities.	contribute to productive participation. b. Predict how modifications to the environment can impact safety during games/physical activities.

MATHEMATICS

Education must equip all students with mathematical skills and ways of thinking that provide them with the flexibility, adaptability, and creativity to function as productive citizens in the changing society of the twenty-first century. Mathematics understanding must extend beyond the skills of calculation and manipulation of numbers and symbols to the use of mathematics to investigate, predict, analyze, interpret, create, and evaluate.

Deep mathematical understanding develops over time. While performance indicators describe the knowledge and skills expected at a grade level, these concepts and skills may be introduced in previous years. They will also be used in later years as the foundations for more advanced topics or in new problem situations.

The use of "understand" in this document is intended to communicate the desired depth and breadth of mathematics programs for Maine students. To understand a procedure or concept means to be able to:

- communicate its meaning, its use, the results of its application, and its implications for a given context
- reason about it by making conjectures and justifying conclusions
- represent it in a variety of ways
- connect it to other ideas in and outside of mathematics, and
- know when and how to apply it to solve problems in mathematics and in other contexts.

Central to mathematical understanding is learning through problems that arise in mathematics and applied contexts. To this end students learn to identify problems, formulate approaches, carry out these approaches, and communicate and justify solutions. Mathematical reasoning pervades all areas of mathematics. Mathematical reasoning is manifested through classification, comparison, deduction, induction, generalization, justification, verification, and spatial visualization.

As growing mathematicians, students need to do mathematics and see themselves as capable of developing their own understanding of mathematical concepts, properties and procedures. Mathematics classrooms should provide practical experiences using mathematics in everyday applications and in other content areas, as well as explorations solely within mathematics. Discussing mathematics is an important component of developing mathematical understanding. Technology should be used as an aid to understanding mathematical ideas. Classrooms that reflect these beliefs prepare students to be confident and effective mathematical thinkers.

As lifelong learners students will research mathematics concepts and methods. They must learn about sources of mathematics information, how to read and comprehend mathematics, how to employ the mathematical ideas they learn, and how to communicate what they learn.

Maine should expect its students to enjoy, appreciate, and use mathematics. Students who are challenged to reach these goals and supported in reaching them will be better prepared for a future in which mathematics will be increasingly important in all areas of endeavor.

MATHEMATICS OUTLINE

A. Number
- Whole
- Rational
- Real

B. Data
- Measurement and Approximation
- Data Analysis
- Probability

C. Geometry
- Geometric Figures
- Geometric Measurement
- Transformations

D. Algebra
- Symbols and Expressions
- Equations and Inequalities
- Functions and Relations

A. NUMBER: Students use numbers in everyday and mathematical contexts to quantify or describe phenomena, develop concepts of operations with different types of numbers, use the structure and properties of numbers with operations to *solve* problems, and perform mathematical computations. Students develop number sense related to magnitude, estimation, and the effects of mathematical operations on different types of numbers. It is expected that students use numbers flexibly, using forms of numbers that best match a situation. Students compute efficiently and accurately. *Estimation* should always be used when computing with numbers or solving problems.

WHOLE NUMBER

PK-2 PERFORMANCE INDICATORS

1 Students *understand* and use number notation and place value to 1000 in numerals.

a. Read and write numbers to 1000 using numerals.
b. Recognize the place values of numbers (hundreds, tens and ones).
c. Compare and order 1, 2, and 3-digit numbers.

2 Students *understand* and use procedures to add and subtract whole numbers with one and two digits.

a. Use and explain multiple strategies for computation.
b. Use an operation appropriate to a given situation.

Grade 3 PERFORMANCE INDICATORS	Grade 4 PERFORMANCE INDICATORS	Grade 5 PERFORMANCE INDICATORS	Grade 6 PERFORMANCE INDICATORS	Grade 7 PERFORMANCE INDICATORS	Grade 8 PERFORMANCE INDICATORS
1 Students *understand* and use number notation and place value to 10,000 in numerals. a. Read and write numbers up to 10,000 in numerals and words. b. Recognize the place values of	1 Students *understand* and use number notation and place value to 100,000. a. Read and write numbers up to 100,000 in numerals and words. b. Recognize the place value of numbers to	1 Students *understand* and use number notation to 10 million in numerals and words. a. Read and write numbers to 10 million in numerals. b. Round numbers to the place value	1 Students use factors and multiples. a. Identify prime numbers and composite numbers and use their properties to *solve* problems. b. Use the property that every integer greater	No performance indicator. It is expected that students continue to use prior concepts and skills in new and familiar contexts.	No performance indicator. It is expected that students continue to use prior concepts and skills in new and familiar contexts.

numbers up to 10,000. c. Compare and order numbers with up to 4 digits. 2 Students *understand* and use procedures to add and subtract whole numbers with up to four digits. a. Display an understanding of the base ten place value system. b. Use an operation appropriate to a given situation. 3 Students *understand* and apply meanings of multiplication and division. a. Multiply single-digit numbers and divide using single-digit divisors and up to two-digit	100,000. c. Compare and order numbers with up to 5 digits. d. Round numbers to the nearest 100 or 1000. 2 Students *understand* and use the concepts of factor and multiple. a. Determine if a single-digit number is a factor of a given whole number. b. Determine if a whole number is a multiple of a given single digit number. c. List the first 10 multiples of a given number. 3 Students *understand* and use procedures to multiply and divide whole numbers by two-digit numbers.	appropriate for given contexts. c. Compare and order numbers up to 10 million. 2 Students multiply and divide numbers up to four digits by numbers up to 2 digits, and by tens, hundreds, and thousands and *interpret* any remainders. 3 Students *solve* problems requiring multiple operations – addition, subtraction, multiplication and division and use the conventions of order of operations (no exponents expected).	than 1 can be written as a product of prime factors. c. *Interpret* and use exponential notation as repeated multiplication. d. Find the least common multiple and greatest common factor of two numbers.		

dividends. b. Use an operation appropriate to a given situation. c. Recognize and use models for multiplication and division situations. d. Use multiple strategies for multiplication and division.	a. Multiply up to four-digit numbers by a single-digit number. b. Multiply three-digit numbers by two-digit numbers. c. Divide whole numbers up to four digits by a single digit number and by ten.				
9-Diploma PERFORMANCE INDICATORS					
No performance indicator. It is expected that students continue to use prior concepts and skills in new and familiar contexts.					

RATIONAL NUMBER					
PK-2 PERFORMANCE INDICATORS					
3 Students recognize unit fractions including 1/2, 1/4, and 1/3.					
Grade 3 PERFORMANCE INDICATORS	Grade 4 PERFORMANCE INDICATORS	Grade 5 PERFORMANCE INDICATORS	Grade 6 PERFORMANCE INDICATORS	Grade 7 PERFORMANCE INDICATORS	Grade 8 PERFORMANCE INDICATORS
4 Students recognize, name, compare, illustrate and use simple fractions. a. Recognize and	4 Students *understand*, name, compare, illustrate, combine and use fractions.	4 Students *understand*, name, compare, illustrate, compute with and use fractions.	2 Students express fractions greater than 0 as decimals and compare positive fractions and decimals numbers and place	1 Students use negative and positive rational numbers expressed as integers, fractions and decimals.	1 Students express or *interpret* numbers using scientific notation from real-life contexts.

name fractions with denominators from 2-10. b. Recognize and name parts of a whole. c. Compare and order fractions with like numerators or with like denominators.	a. Add and subtract fractions with like denominators and use repeated addition to multiply a unit fraction by a whole number. b. List equivalent fractions. c. Represent fractions greater than one as mixed numbers and mixed numbers as fractions. 5 Students *understand* and use number notation and place value in numbers with two decimal places in real world contexts including money. a. Compare, order, read, round and *interpret* decimals with up to two decimal places. b. Add and subtract	a. Add and subtract fractions with unlike denominators. b. Multiply a fraction by a whole number. 5 Students *understand* and use number notation and place value in numbers with three decimal places. a. Compare, order, read, round and *interpret* decimals with up to three decimal places. b. Add and subtract decimals with up to three decimal places. c. Multiply and divide decimals with up to three decimals places by a 2-digit whole number. d. Develop the concept of a fraction as division through	them on the number line. 3 Students add, subtract, and multiply, and divide numbers expressed as fractions and as decimals including mixed numbers. 4 Students *understand* how to express relative quantities as percentages and as decimals and fractions. a. Use ratios to describe relationships between quantities. b. Use decimals, fractions and percentages to express relative quantities. c. *Interpret* relative quantities expressed as decimals, fractions and percentages.	a. Recognize rational numbers as quotients of integers with a non-zero denominator and that rational numbers can be negative or positive. b. Compare signed rational numbers and place them on the number line. 2 Students compute with signed rational numbers. a. Use and *interpret* exponents. b. Follow conventions of order of operations including exponents. 3 Students *understand* that when the ratio of two varying quantities is constant, the two quantities are	a. Use positive and negative integer exponents for powers of ten. b. Convert between standard and scientific notation forms and compare the relative size of numbers including the *interpretation* of numbers as displayed on calculators and computers.

	decimals with up to two decimal places. c. Multiply and divide decimals with up to two decimal places by a 1- digit whole number. d. Connect equivalent decimals and fractions for 1/10s, 1/4s and 1/2s in meaningful contexts.	expressing a fraction with denominators of 2, 4,5,10, as a decimal and the decimal as a fraction. 6 Students *understand* concepts of positive and negative integers. a. Place positive and negative integers on a number line or scale. b. Compare and order positive and negative integers. c. Find the distance between two integers in a context.	5 Students multiply and divide decimals with up to 3-decimal places by tens, hundreds, and thousands.	in direct proportion. a. Use ratios to compare quantities and use comparison to solve problems. b. Identify proportional relationships. c. Use proportions to *solve* problems. 4 Students *interpret* and use percents to *solve* problems. a. Use percents when comparing fractional parts of sets of unequal size. b. *Solve* practical problems involving percents.	

9-Diploma PERFORMANCE INDICATORS

No performance indicator.

It is expected that students continue to use prior concepts and skills in new and familiar contexts.

REAL NUMBER

PK-2 PERFORMANCE INDICATORS

No performance indicator.

Students are expected to use only rational numbers at this level.

Grade 3 PERFORMANCE INDICATORS	Grade 4 PERFORMANCE INDICATORS	Grade 5 PERFORMANCE INDICATORS	Grade 6 PERFORMANCE INDICATORS	Grade 7 PERFORMANCE INDICATORS	Grade 8 PERFORMANCE INDICATORS
No performance indicator. Students are expected to use only rational numbers at this level.	No performance indicator. Students are expected to use only rational numbers at this level.	No performance indicator. Students are expected to use only rational numbers at this level.	No performance indicator. At this level students use rational numbers including rational approximations for pi or square roots.	No performance indicator. At this level students use rational numbers including rational approximations for pi or square roots.	1 Students *understand* the set of real numbers as containing the rational numbers and the irrational numbers. a. Know that there are real numbers that are not rational numbers. b. Know some common examples of irrational numbers such as π or those arising from square roots. c. Use square roots. Be able to *estimate* the value of the square roots of whole numbers

					and place them on the number line.

9-Diploma PERFORMANCE INDICATORS

1 Students know how to represent and use real numbers.

a. Use the concept of n^{th} root.
b. *Estimate* the value of roots and use technology to approximate them.
c. Compute using laws of exponents.
d. Multiply and divide numbers expressed in scientific notation.
e. *Understand* that some quadratic equations do not have real solutions and that the set of real numbers can be extended to allow for solutions to these equations.

B. DATA: Students make measurements and collect, display, evaluate, analyze and compute with data to describe or *model* phenomena and to make decisions based on data. Students compute statistics to summarize data sets and use concepts of probability to make predictions and describe the uncertainty inherent in data collection and measurement. It is expected that when working with measurements students:

- *Understand* that most measurements are approximations and that taking repeated measurements reveals this variability.
- *Understand* that a number without a *unit* is not a measurement. Thus an appropriate *unit* must always be attached to a number to provide a measurement.
- *Understand* that the *precision* and *accuracy* of a measurement depends on selecting the appropriate tools and *units*.
- Use *estimation* comparing measures to *benchmarks* appropriate to the type of measure and *units*.

MEASUREMENT AND APPROXIMATION

PK-2 PERFORMANCE INDICATORS

1 Students *understand* and use *units* of time, temperature, and money.

a. Apply and use sequences of hours in a day, days in a week and months in a year.
b. Tell time to the hour and half hour.
c. Identify and give the value of different coins.
d. Find the total value of collections of coins up to $1.00.

Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8

PERFORMANCE INDICATORS	PERFORMANCE INDICATORS	PERFORMANCE INDICATORS	PERFORMANCE INDICATORS	PERFORMANCE INDICATORS	PERFORMANCE INDICATORS
1 Students *understand* and use measurement of time and temperature. a. Select appropriate tools and *units*. b. *Solve* and *justify* problems with these measures.	1 Students *understand* and use measurement of time, capacity and temperature. a. Select appropriate tools and *units* for these measures. b. *Solve* and *justify* problems with these measures.	1 Students *understand* and use measures of elapsed time, temperature, capacity, mass and weight. a. Select appropriate tools and *units* mass in grams, weight in pounds. b. *Solve* and *justify* problems with these measures.	1 Students convert within measurement systems. a. *Solve* problems where different *units* are used within the metric and traditional systems of measurement.	No performance indicator. Although no performance indicators are stated at this level, it is expected that students continue to use prior concepts and skills in new and familiar concepts.	1 Students *understand* and use *derived measures* (measurements expressed as rates). a. Calculate measures using multiple attributes including speed (distance per time). b. *Solve* for an unknown component of a measure including finding time given average speed and distance. 2 Students convert across measurement systems and within a system for different *units* in *derived measures*. a. Approximate metric and customary equivalents

					given a conversion factor. b. Convert *derived measures*, including feet per second to miles per hour.

9-Diploma PERFORMANCE INDICATORS
1 Students *understand* the relationship between *precision* and *accuracy*. a. Express answers to a reasonable degree of *precision* in the context of a given problem. b. Represent an approximate measurement using appropriate numbers of significant figures. c. Know that most measurements are approximations and explain why it is useful to take the mean of repeated measurements.

DATA ANALYSIS

PK-2 PERFORMANCE INDICATORS

2 Students read, construct and *interpret* picture graphs.

Grade 3 PERFORMANCE INDICATORS	Grade 4 PERFORMANCE INDICATORS	Grade 5 PERFORMANCE INDICATORS	Grade 6 PERFORMANCE INDICATORS	Grade 7 PERFORMANCE INDICATORS	Grade 8 PERFORMANCE INDICATORS
2 Students read, construct and *interpret* bar graphs.	2 Students collect and represent data in tables, line plots, and bar graphs, and read and *interpret* theses types of data displays.	2 Students read, construct and *interpret* line graphs. 3 Students find and use median, mode, and range for a set of data.	2 Students read and *interpret* pie charts. 3 Students find and compare the mean, median, mode and range for sets of data.	1 Students use graphs and charts to represent, organize, *interpret*, and draw inferences from data. a. *Create* tables, pictograms, bar graphs, line graphs, pie	3 Students use the mean, median, mode, range, and quartiles to *solve* problems involving raw data and information from data displays.

				charts, stem and leaf plots, box and whiskers plots, and histograms using pencil and paper and electronic technologies. b. Draw conclusions based on graphs and charts including tables, pictograms, bar graphs, line graphs, pie charts, stem and leaf plots, box and whiskers plots, and histograms.	

9-Diploma PERFORMANCE INDICATORS

2 Students *understand* correlation and cause and effect.

a. Recognize when correlation has been confused with cause and effect.
b. *Create* and *interpret* scatter plots and *estimate* correlation and lines of best fit.
c. Recognize positive and negative correlations based on data from a table or scatter plot.
d. *Estimate* the strength of correlation base upon a scatter plot.

3 Students *understand* and know how to describe distributions and find and use descriptive statistics for a set of data.

a. Find and apply range, quartiles, mean absolute deviation, and standard deviation (with technology) of a set of data.
b. *Interpret*, give examples of and describe key differences between different types of distributions: uniform, normal and skewed.
c. For the sample mean of normal distributions, use the standard deviation for a group of observations to establish 90%, 95%, or 99% confidence intervals.

4 Students *understand* that the purpose of random sampling is to reduce bias when creating a representative sample for a set of data.

a. Describe and account for the difference between sample statistics and statistics describing the distribution of the entire population.
b. Recognize that sample statistics produce *estimates* for the distribution of an entire population, and recognize that larger sample sizes will produce more reliable *estimates*.
c. Apply methods of *creating* random samples and recognize possible sources of bias in samples.

PROBABILITY

PK-2 PERFORMANCE INDICATORS

No performance indicator.

While students are expected to have experiences with probability in these grades, it is not expected that the knowledge be secure.

Grade 3 PERFORMANCE INDICATORS	Grade 4 PERFORMANCE INDICATORS	Grade 5 PERFORMANCE INDICATORS	Grade 6 PERFORMANCE INDICATORS	Grade 7 PERFORMANCE INDICATORS	Grade 8 PERFORMANCE INDICATORS
No performance indicator. While students are expected to have experiences with probability in grade 3, it is not expected that the knowledge be secure.	No performance indicator. While students are expected to have experiences with probability in grade 4, it is not expected that the knowledge be secure.	No performance indicator. While students are expected to have experiences with probability in grade 5, it is not expected that the knowledge be secure.	No performance indicator. While students are expected to have experiences with probability in grade 6, it is not expected that the knowledge be secure.	2 Students *understand* and apply concepts of probability to simple events. a. Describe events as likely or unlikely and discuss the concept of likelihood using such words as certain, equally likely, and impossible.	4 Students *understand* and apply concepts of probability. a. Use appropriate terminology to describe complementary and mutually exclusive events. b. Use an *understanding* of relative frequency to make and test

				b. Predict the probability of outcomes of simple experiments and verify predictions using the *understanding* that the probability of an occurrence is the ratio of the number of actual occurrences to the number of possible occurrences. c. *Interpret* probabilities between and including zero and one and explain why zero and one are the upper and lower limits for probability values.	conjectures about results of experiments and simulations. c. Compute probabilities for compound events, using such methods as organized lists, tree diagrams, and area models.

9-Diploma PERFORMANCE INDICATORS

5 Students *understand* the relationship of probability to relative frequency and know how to find the probability of compound events.

a. Find the expected frequency of an event.
b. Find the expected value of events.
c. Find the probability of compound events including independent and dependent events.

C. GEOMETRY: Students use measurement and observation to describe objects based on their sizes and shapes, *model* or construct two- and three-dimensional objects, *solve* problems involving geometric properties, compute areas and volumes based on object properties and dimensions, and perform transformations on geometric figures. When making or calculating measures, students use *estimation* to check the reasonableness of results.

GEOMETRIC FIGURES

PK-2 PERFORMANCE INDICATORS

1 Students recognize, *classify* and *create* geometric figures in two and three dimensions.

a. Identify shapes in the physical environment.
b. *Classify* figures as circles, triangles, and quadrilaterals by focusing on their properties.
c. *Create* shapes by using objects to combine and *decompose* other shapes.

Grade 3 PERFORMANCE INDICATORS	Grade 4 PERFORMANCE INDICATORS	Grade 5 PERFORMANCE INDICATORS	Grade 6 PERFORMANCE INDICATORS	Grade 7 PERFORMANCE INDICATORS	Grade 8 PERFORMANCE INDICATORS
1 Students identify, describe, and *classify* familiar two-dimensional shapes. a. Describe and *classify* two-dimensional shapes according to the number of vertices and by number, length and shape of sides. b. Know how to put shapes together and take them apart to form	1 Students identify and name angles, lines, relationships between lines, quadrilaterals, and triangles. a. Identify perpendicular and parallel lines and sides. b. Identify and sketch the following figures: rectangle, square, parallelogram, rhombus, and trapezoid. c. Identify and	1 Students identify, describe and *classify* solid figures. a. Identify edges, vertices and faces in three-dimensional figures. b. Describe and *classify* solid figures according to the number of edges, faces, and vertices as well as the shapes of faces.	1 Students represent solid figures in two dimensions. a. Represent cubes, prisms, and square- or triangular-based pyramids using *nets*. b. Recognize and *classify* solids presented in picture views. c. Sketch 3-D figures.	1 Students *understand* angle properties of lines in the plane. a. Identify and name straight angles, angles at a point, and vertical angles and use these to find unknown angles. b. Recognize that straight angles add to 180° and angles at a point add to 360°. c. Recognize that	1 Students know and use properties of polygons. a. Use the triangle inequality. b. Find the sum of the interior angles of a polygon. c. Use the property that the sum of the exterior angles of a polygon is 360 degrees. 2 Students know and use angle properties of

other shapes. c. Identify edges, vertices and right angles in two-dimensional shapes. d. Tell whether a given angle is greater or smaller than a right angle.	sketch the following triangles: isosceles, equilateral, acute, obtuse and right.			vertical angles are equal.	parallel lines to *solve* problems and determine geometric relationships. a. Know and use properties of angles created when parallel lines are cut by a transversal. b. Use angle properties to determine whether lines are parallel. c. Know and use properties of angles created by parallel lines to determine the angle properties of trapezoids and parallelograms and apply these properties in problem situations. 3 Students know and use the Pythagorean theorem.

9-Diploma PERFORMANCE INDICATORS
1 Students *justify* statements about polygons and *solve* problems. a. Use the properties of triangles to prove theorems about figures and relationships among figures. b. *Solve* for missing dimensions based on congruence and similarity. c. Use the Pythagorean Theorem in situations where right triangles are created by adding segments. d. Use the distance formula. 2 Students *justify* statements about circles and *solve* problems. a. Use the concepts of central and inscribed angles to *solve* problems and *justify* statements. b. Use the relationships among arc length, circumference and area of circles and sectors to *solve* problems and *justify* statements. 3 Students *understand* and use basic ideas of trigonometry. a. Identify and find the value of trigonometric ratios for angles in right triangles. b. Use trigonometry to *solve* for missing lengths in right triangles. c. Use inverse trigonometric functions to find missing angles in right triangles.

GEOMETRIC MEASUREMENT
PK-2 PERFORMANCE INDICATORS
2 Students *understand* how to measure length and capacity and use appropriate *units*. a. Measure length and capacity by *direct and indirect comparison*. b. Measure the length and capacity of objects using non-standard *units*. c. Measure the length of objects to whole inches and centimeters.

Grade 3 PERFORMANCE INDICATORS	Grade 4 PERFORMANCE INDICATORS	Grade 5 PERFORMANCE INDICATORS	Grade 6 PERFORMANCE INDICATORS	Grade 7 PERFORMANCE INDICATORS	Grade 8 PERFORMANCE INDICATORS
2 Students *understand* how to find the distance around a figure.	2 Students *understand* the concept of area of a figure.	2 Students find the area of triangles and quadrilaterals.	2 Students find the perimeters and areas of geometric figures.	2 Students *solve* problems involving perimeter and area.	2 Students find the volume and surface area of prisms, pyramids, cylinders,

a. Calculate and measure the distance around a figure whose perimeter is comprised of straight edges.	a. Find the area of shapes in non-standard *units* (e.g., *estimate* the number of whole square *units* that cover a figure). b. Find the area of a square and a rectangle in standard *units*. c. Recognize and *estimate* the relative sizes of 1 square meter and 1 square centimeter and 1 square inch and 1 square foot.	a. Know how to derive and use the formula, A = (1/2) *bh* for the area of a triangle. b. Find the area of parallelograms. 3 Students *understand* how to find the volume and surface area of rectangular prisms. a. Know how to build solids with unit cubes and find their volume. b. Recognize and *estimate* the relative sizes of 1 cubic meter and 1 cubic centimeter. Or 1 cubic inch and 1 cubic foot. c. Know how to derive and use the formula (length x width x height) for the volume of a rectangular prism.	a. Triangles b. Quadrilaterals c. Circles 3 Students find the volume and surface areas of right prisms with bases that are triangles and quadrilaterals.	a. *Solve* problems involving the area and perimeter of regions in the plane bounded by line segments and circular arcs. b. *Solve* problems involving the area of combined figures.	and other figures *composed* of these solids. a. Apply the *understanding* that the volume of prisms and cylinders can be found by multiplying the area of a base by the height of the solid. b. Apply the *understanding* that the volume of pyramids can be found by multiplying the area of a base by 1/3 the height of the solid.

		d. *Create nets* to aid visualization and computation. 4 Students *understand* how to describe position and direction in two dimensions a. Locate points on the Cartesian plane. b. Determine horizontal and vertical distance on the coordinate plane. c. Measure angles in degrees.			

9-Diploma PERFORMANCE INDICATORS

4 Students find the surface area and volume of 3-D objects.

a. Find the volume and surface area of cones and spheres.
b. Use formulas to determine the effect of changes in linear dimensions on the volume and surface area of similar 3-D figures.

TRANSFORMATIONS

PK-2 PERFORMANCE INDICATORS

No performance indicator.

While students are expected to have experiences with symmetry, transformations, and congruence in these grades, it is not expected that the knowledge be secure.

Grade 3 PERFORMANCE INDICATORS	Grade 4 PERFORMANCE INDICATORS	Grade 5 PERFORMANCE INDICATORS	Grade 6 PERFORMANCE INDICATORS	Grade 7 PERFORMANCE INDICATORS	Grade 8 PERFORMANCE INDICATORS
No performance indicator. While students are expected to have experiences with symmetry, transformations and congruency in grade 3 it is not expected that the knowledge be secure.	3 Students recognize congruent figures and line symmetry in figures. a. Recognize whether a line is a line of symmetry in a figure. b. Complete a symmetric figure given a line of symmetry. c. Recognize congruent figures.	5 Students reflect, slide and rotate plane figures. a. Identify figures with rotational or line symmetry. b. *Create* figures with rotational or line symmetry c. Slide, rotate or reflect figures to create patterns or demonstrate congruence.	4 Students *understand* and use reflections, rotations, and translations to define and identify congruent plane figures. a. Apply the *understanding* that if a plane figure can be laid on top of another plane figure by rotations, translations or reflections then the figures are congruent. 5 Students *understand* how to use proportional relationships to make indirect linear measurements and use scale drawings to make linear measurements.	3 Students *understand* and use the concept of scale drawings to enlarge or reduce two dimensional plane figures. a. Use the concept of scale factors when enlarging or reducing and recognize the invariance of shape. b. Apply the *understanding* that enlargement or reduction by a scale factor leaves angle measures unchanged. c. Identify similar figures and name corresponding parts.	No performance indicator. It is expected that students continue to use prior concepts and skills in new and familiar contexts.
9-Diploma PERFORMANCE INDICATORS					
No performance indicator.					

It is expected that students continue to use prior concepts and skills in new and familiar contexts. Methods of transformational geometry might also be used in Geometric Figures 9-Diploma performance indicator 1.

D. ALGEBRA: Students use symbols to represent or *model* quantities, patterns and relationships and use symbolic manipulation to *evaluate* expressions and *solve* equations. Students *solve* problems using symbols, tables, graphs and verbal rules choosing the most effective representation and converting among representations.

SYMBOLS AND EXPRESSIONS

PK-2 PERFORMANCE INDICATORS

1 Students *understand* how to represent quantities as simple expressions using addition and subtraction.

a. Show that any quantity can be represented by equivalent expressions e.g., 4 + 5 + 1; 3 + 3 + 3 +1; 9 + 1 each represents the quantity 10.
b. Know that addition is commutative and apply this *understanding* in computation and problem-solving.
c. Know that addition and subtraction are inverse operations and apply this *understanding* in computation and problem-solving.

Grade 3 PERFORMANCE INDICATORS	Grade 4 PERFORMANCE INDICATORS	Grade 5 PERFORMANCE INDICATORS	Grade 6 PERFORMANCE INDICATORS	Grade 7 PERFORMANCE INDICATORS	Grade 8 PERFORMANCE INDICATORS
1 Students use equivalent expressions to aid computation such as knowing that 43 + 56 is the same as 40 + 3 + 50 + 6.	1 Students *create* and *evaluate* simple expressions in the context of numbers and operations as described in Standard A: Number for this grade level.	1 Students *create* and *evaluate* simple expressions in the context of numbers and operations as described in Standard A: Number for this grade level.	1 Students *create* and *evaluate* expressions. a. *Create* and *evaluate* expressions using whole numbers. b. *Create* and *evaluate* expressions using positive fractions including decimals.	1 Students *create* and *evaluate* expressions. a. *Create* and *evaluate* expressions using integers. b. *Create* and *evaluate* expressions using rational numbers.	1 Students *create*, *evaluate* and manipulate expressions. a. Add and subtract linear expressions. b. Apply the properties of the real number system (e.g., distributive and associative laws) to create

					equivalent expressions

9-Diploma PERFORMANCE INDICATORS

1 Students *understand* and use polynomials, and expressions with rational exponents.

a. *Simplify* expressions with rational exponents.
b. Add, subtract, multiply, polynomials.
c. Factor the common term out of polynomial expressions
d. Divide polynomials by (ax+b)

EQUATIONS AND INEQUALITIES

PK-2 PERFORMANCE INDICATORS

2 Students *understand* that the equal sign means, "is the same as."

a. Identify true and false number sentences.
b. Describes what makes number sentences true or false and applies this knowledge.
c. Find solutions for unknowns in simple open number sentences such as 12 = 4 + [ ].

Grade 3 PERFORMANCE INDICATORS	Grade 4 PERFORMANCE INDICATORS	Grade 5 PERFORMANCE INDICATORS	Grade 6 PERFORMANCE INDICATORS	Grade 7 PERFORMANCE INDICATORS	Grade 8 PERFORMANCE INDICATORS
2 Students find the unknown in simple equations (or open sentences) in the context of numbers and operations as described in Standard A: Number for this grade level such as: 3 + 5 = [ ] + 3 3 + 9 = [ ] + 10 [ ] + ( ) = 10	2 Students find the unknown in simple equations in the context of numbers and operations as described in Standard A: Number for this grade level such as: 3 • b = 12 3 + 4 = x + 5 6 x 5 = 3 x [ ]	2 Students find the unknown in simple equations in the context of numbers and operations as described in Standard A: Number for this grade level such as: 3 9 – k = 39 – 40 78 +b = 57 + 79 30 x A = 276 (3 + 4) x 6 = 6 x [ ]	2 Students recognize and *solve* problems involving linear equations and recognize examples and non-examples of linear equations. a. *Solve* equations of the form *ax* +/- *b* = *c* where a, b and c	2 Students *understand* and *solve* problems involving linear equations and know that a linear equation can be written in the form 0= *ax* + *b*. a. *Solve* equations of the form *ax* + *b* = *c* where a, b and c are	2 Students *understand* and *solve* problems involving linear equations. a. Be able to *solve* any linear equation including linear equations of the form *ax* + *b* = *cx* + *d*.

		3 x15 = 3 x (10 + [ ])	are whole numbers. b. Recognize from a table whether a relationship has a constant rate of change.	positive rational numbers or positive or negative integers. b. Convert equations to *0 = ax + b* form.	b. Recognize that, in general, linear equations have just one solution—but know also that some linear equations can have no solution and those linear equations that are identities have every value of x as a solution. Otherwise, linear equations have just one solution. c. Use graphs to *estimate* solutions to equations and systems of equations, check algebraic approaches, provide alternative solution paths, and to communicate the solution to a problem. 3 Students

					understand and *solve* linear inequalities in one unknown. a. Represent problem situations as inequalities. b. *Solve* linear inequalities. c. *Interpret* the solutions to linear inequalities.

9-Diploma PERFORMANCE INDICATORS

2 Students *solve* families of equations and inequalities.

a. *Solve* systems of linear equations and inequalities in two unknowns and interpret their graphs.
b. *Solve* quadratic equations: graphically, by factoring in cases where factoring is efficient and by applying the quadratic formula.
c. *Solve* simple rational equations similar to $\frac{1}{2x+1} = 5$
d. *Solve* absolute value equations and inequalities and interpret the results.
e. Apply the *understanding* that the solution(s) to equations of the form $f(x) = g(x)$ are the x–value(s) of the points(s) of intersection of the graphs of $f(x)$ and $g(x)$ and common outputs in table of values.
f. Explain why the coordinates of the point of intersection of the lines represented by a system of equations is its solution and apply this *understanding* to solving problems.

3 Students *understand* and apply ideas of logarithms.

a. Use and *interpret* logarithmic scales.
b. *Solve* equations in the form of $x = b^y$ using the equivalent form $y = \log_b x$.

FUNCTIONS AND RELATIONS

PK-2 PERFORMANCE INDICATORS

3 Students *understand* how to *create*, identify, describe, and extend patterns given a pattern or a rule.

a. Describe, extend, and *create* a repeating pattern.
b. Describe, extend and *create* growing patterns.

Grade 3 PERFORMANCE INDICATORS	Grade 4 PERFORMANCE INDICATORS	Grade 5 PERFORMANCE INDICATORS	Grade 6 PERFORMANCE INDICATORS	Grade 7 PERFORMANCE INDICATORS	Grade 8 PERFORMANCE INDICATORS
3 Students *understand* arithmetic relationships among positive whole numbers. a. Use the inverse relationships between addition and subtraction and between multiplication and division and the commutative laws of multiplication and addition to *solve* problems. b. Be able to show that for whole numbers subtraction and division are not commutative and	3 Students use tables, rules, diagrams and patterns to represent the relationship between quantities and to extend sequences.	3 Students use tables, rules, diagrams, and graphs to represent and analyze the relationship between quantities.	3 Students use tables, formulas, diagrams, and graphs to analyze relationships between quantities. a. Use tables, formulas and graphs to analyze constant difference (additive) relationships. b. Use tables, formulas and graphs to analyze constant ratio (multiplicative) relationships.	3 Students *understand* and use directly proportional relationships, $y = kx$. a. Recognize directly proportional relationships by information in a table, graph, or formula. b. Translate common directly proportional relationships into symbolic statements and graphs. c. *Interpret* the slope and y-intercept of the graph of $y = kx$ in terms of a	4 Students *understand* and use the basic properties of linear relationships, $y = kx + b$. a. *Understand* that a linear relationships is characterized by a constant rate of change, k. b. *Understand* that the graph of a linear relationship $y = kx + b$ is a line where the slope is k and b is the y-coordinate of the point where the graph crosses the y-axis (i.e., value

show that multiplication and addition are commutative. 4 Students *create*, describe, explain and extend patterns with numbers and geometric objects.				given context.	of y when $x = 0$). c. Translate common linear phenomena into symbolic statements and graphs and interpret the slope and y-intercept of the graph of $y = kx + b$ in terms of the original situation.

9-Diploma PERFORMANCE INDICATORS

4 Students *understand* and *interpret* the characteristics of functions using graphs, tables and algebraic techniques.

a. Recognize the graphs and sketch graphs of the basic functions
   $f(x) = x^n$, where n = 1 to 3
   $f(x) = ax^2 + bx + c$
   $f(x) = \sqrt{x}$,
   $f(x) = |x|$ and $f(x) = \frac{1}{x}$, $f(x) = a^x$, and $f(x) = kx + b$.
b. Use concepts such as domain, range, zeros, intercepts, maximum and minimum values.
c. Use the concepts of average rate of change (table of values) and increasing and decreasing over intervals and use these characteristics to compare functions.

5 Students express relationships *recursively* and use *iterative* methods to *solve* problems.

a. Express the (n+1)st term in terms of the nth term and describe relationships in terms of a starting point and rule followed to transform one term to the next.
b. Use technology to perform repeated calculations to develop solutions to real life problems involving linear, exponential and other patterns of change.

SCIENCE AND TECHNOLOGY

The world around us continues to change and be changed at a rapid pace. Science and Technology provide us with tools to understand the changes, as well as knowledge and processes to address the challenges. To be successful in this global society, students must access, understand, and evaluate current information and tools related to science and technology.

The study of science includes processes and a body of knowledge. Processes are the ways scientists investigate and communicate about the natural world. The body of knowledge includes concepts, principles, facts, laws, and theories about the way the world around us works. Technology includes the study of tools and the process of technological design. It is a partner to science.

Science and technology merge in the pursuit of solutions to problems that require the application of scientific understanding and product design. Solving technological problems demands scientific knowledge while modern technologies make it possible to discover new scientific knowledge. In a world shaped by science and technology, it is important for students to learn how science and technology connect with demands of society and the knowledge of all content areas.

Helping students develop curiosity and excitement for science and technology while they gain essential knowledge and skills is best achieved by actively engaging learners in multiple experiences that increase their ability to be critical thinkers and problem solvers. Standard A describes the four themes that connect the ideas in Standards D and E. Standards D and E describe performance indicators that encompass the subject matter conventionally referred to as life, physical, earth, and space science. It is essential that the understanding of these themes be developed in the context of the knowledge related to life, physical, earth, and space science. Standard B describes the processes of scientific inquiry and technological design and Standard C describes the enterprises of science and technology and their connection to society. Standards B and C, like Standard A, should always be embedded throughout the curriculum and integrated with the ideas of Standards D and E, rather than taught separately. Students should be able to understand and solve complex problems that require the integration of knowledge. Accordingly, schools must create learning experiences that require the application of knowledge and processes in the context of authentic, integrated problems.

Unifying Themes - The proposed revised standards begin with a focus on four themes of science and technology: systems, models, scale, and constancy and change. These themes can provide teachers and students with a scaffold on which to develop the details of the standards. National standards documents identify themes as critical knowledge for students in the 21st century.

The Technological Design Process and Scientific Inquiry - The proposed revised standards for Science and Technology define both the student skills of scientific inquiry and the student skills of technological design. The inclusion of scientific inquiry, the development of a coherent section on the technological design and the inclusion of a standard on Scientific and Technological Enterprise highlights importance of developing student understandings of the unique characteristics of and relationships between science and technology. The Scientific and Technological Enterprise outlines key understandings about the relationships among science, technology and society and underscores the role of citizens in the decision making process related to science and technology.

OUTLINE OF SCIENCE AND TECHNOLOGY STANDARDS AND PERFORMANCE INDICATORS

A. Unifying Themes
    1. Systems
    2. Models
    3. Constancy and Change
    4. Scale
B. The Skills and Traits of Scientific Inquiry and Technological Design
    1. Skills and Traits of Scientific Inquiry
    2. Skills and Traits of Technological Design
C. The Scientific and Technological Enterprise
    1. Understandings of Inquiry
    2. Understandings About Science and Technology
    3. Science, Technology, and Society
    4. History and Nature of Science
D. The Physical Setting
    1. Universe and Solar System
    2. Earth
    3. Matter and Energy
    4. Force and Motion
E. The Living Environment
    1. Biodiversity
    2. Ecosystems
    3. Cells
    4. Heredity and Reproduction
    5. Evolution

A. Unifying Themes: Students apply the principles of systems, models, constancy and change, and scale in science and technology.

	PK – 2 *PERFORMANCE INDICATOR*	3-5 *PERFORMANCE INDICATOR*	6-8 *PERFORMANCE INDICATOR*	9-Diploma *PERFORMANCE INDICATOR*
A1 Systems	Students recognize that parts work together, and make up whole human-made and natural objects. a. Explain that most human-made and natural objects are made of parts that when put together, can do things they could not do separately.	Students explain interactions between parts that make up a whole human-made and natural thing. a. Give examples that show how individual parts of organisms, ecosystems or human-made structures can influence one another. b. Explain that things including organism, ecosystems or human-made structures may not work as well, or at all, if a part is missing broken, worn out, mismatched or misconnected.	Students describe principles of systems in human-made and natural things and processes. a. Explain how individual parts working together can do more than each part individually in such systems as an organism, Earth systems, solar system or human-made structures. b. Explain how the output of one part of the system, including waste products from manufacturing or organisms, can become the input of another part of a system. c. Explain that systems are nested and one system may be thought of as containing subsystems as well as being a subsystem of a larger system.	Students apply an understanding of systems to explain and analyze human-made and natural phenomena. a. Analyze a system using principles including boundaries, subsystems, inputs, outputs, feedback, or the system's relation to other systems, to explain phenomena, and design solutions to a problem. b. Explain how it may not always be possible to predict the impact of changing some part of a human-made or natural system.

	PK – 2 *PERFORMANCE INDICATOR*	3-5 *PERFORMANCE INDICATOR*	6-8 *PERFORMANCE INDICATOR*	9-Diploma *PERFORMANCE INDICATOR*
A2 Models	Students identify models and the objects they represent to learn about their features. a. Describe ways in which toys and pictures are like the real things they model. b. Use a model as a tool to describe something about the motion of objects or the features of plants and animals.	Students use models to represent objects, processes, and events from the physical setting, the living environment and the technological world. a. Represent the features of a real object, event, or process using models including geometric figures, number sequences, graphs, diagrams, sketches, maps, or three-dimensional figures, and note ways in which those representations do not match all features of the originals.	Students compare advantages and disadvantages of models to examine a variety of real-world phenomena from the physical setting, the living environment and the technological world. a. Compare different types of models (such as physical, conceptual, and mathematical) that can be used to represent the same thing including chemical reactions, motion, or cells in order to match the purpose and complexity of a model to its use. b. Make changes to models, and suggest how those changes may affect the real thing.	Students evaluate the effectiveness of a model by comparing its predictions to actual observations from the physical setting, the living environment and the technological world.

	PK – 2 *PERFORMANCE INDICATOR*	3-5 *PERFORMANCE INDICATOR*	6-8 *PERFORMANCE INDICATOR*	9-Diploma *PERFORMANCE INDICATOR*
A3 Constancy and Change	Students observe that in the physical setting, the living environment, and the technological world some things change over time and some things stay the same. a. Describe the size, weight, color, or movement of things over varying lengths of time, and note other qualities that change or remain the same.	Students identify basic patterns of change in the physical setting, the living environment and the technological world. a. Recognize patterns of change—including steady, repetitive, irregular or apparently unpredictable change. b. Make tables or graphs to represent changes.	Students recognize how patterns of change vary in physical, biological, and technological systems. a. Give examples of systems including ecosystems, Earth systems and technologies that appear to be unchanging, even though things are happening to them, and identify any feedback mechanisms that may be modifying the changes. b. Describe rates of change and cyclic patterns using appropriate grade level mathematics.	Students identify examples of phenomena that result from varying types and rates of change in physical, biological, and technological systems with and without counterbalances.
A4 Scale	Students observe differences in scale. a. Compare significantly different sizes, weights, ages, and speeds of objects.	Students use mathematics to describe scale for human-made and natural things. a. Measure things to compare sizes, speeds, times, distances, and weights. b. Use fractions and multiples to make comparisons of scale.	Students use scale to describe objects, phenomena, or processes related to Earth, space, matter, and mechanical and living systems. a. Describe how some things change or work differently at different scales. b. Use proportions, averages, and ranges to describe small and large extremes	Students apply understanding of scale to explain phenomena in physical, biological, and technological systems. a. Give examples of how large changes of scale may change how physical and biological systems work. b. Mathematically represent large magnitudes of scale.

			of scale.	

B. The Skills and Traits of Scientific Inquiry and Technological Design: Students plan, conduct, analyze data from and communicate results of in-depth scientific investigations and use a systematic process, tools, equipment, and a variety of materials to create a technological design producing a solution or product to meet a specified need.

	PK – 2 *PERFORMANCE INDICATOR*	3-5 *PERFORMANCE INDICATOR*	6-8 *PERFORMANCE INDICATOR*	9-Diploma *PERFORMANCE INDICATOR*
B1 Skills and Traits of Scientific Inquiry	Students plan, conduct, and communicate results of simple investigations. a. Ask questions and make observations about objects, organisms, and events in the environment. b. Plan and safely conduct a simple investigation to answer questions. c. Use simple instruments with basic units of measurement to gather data and extend the senses. d. Know what constitutes evidence used for constructing a	Students plan, conduct, analyze data from and communicate results of investigations, including fair tests. a. Pose investigable questions and seek answers from reliable sources of scientific information and their own investigations. b. Plan and safely conduct an investigation including simple experiments that involve a fair test. c. Use simple equipment, tools, and appropriate metric units of measurement to gather data and extend the senses. d. Use data to construct and support a reasonable explanation.	Students plan, conduct, analyze data from, and communicate results of investigations, including simple experiments. a. Identify questions that can be answered through scientific investigations. b. Design and safely conduct scientific investigations including controlled experiments. c. Use appropriate tools, metric units and techniques to gather, analyze, and interpret data. d. Use mathematics to ask questions; gather, organize, and present data; and structure convincing explanations. e. Use logic and critical reasoning to develop descriptions, explanations,	Students methodically plan, conduct, analyze data from, and communicate results of in-depth scientific investigations, including experiments guided by a testable hypothesis. a. Identify questions, concepts, and testable hypotheses that guide scientific investigations. b. Design and safely conduct methodical scientific investigations, including controlled experiments. Use statistics to analyze and interpret results. c. Formulate and revise scientific investigations and models using logic and evidence. d. Use a variety of tools and technologies to improve investigations and

	reasonable explanation. e. Use writing, speaking, and drawing to communicate investigations and explanations.	e. Communicate, critique, and analyze own scientific work and the work of other students.	predictions, and models using evidence. f. Recognize alternative explanations and predictions. g. Communicate scientific procedures and explanations.	communications. e. Recognize and analyze alternative explanations and models using scientific criteria. f. Communicate and defend scientific ideas.
B2 Skills and Traits of Technological Design	Students use a simple design process, and basic tools and materials to solve a problem or create a product. a. Describe a design problem in students' own words. b. Propose a way to build something or get something to work better. c. Use suitable tools, materials, safe techniques, and measurements to implement a proposed solution to a design problem. d. Judge how well a product or design solved a problem. e. Present a design or solution to a	Students use a design process, simple tools, and a variety of materials to solve a problem or create a product, recognizing the constraints that need to be considered. a. Identify and explain a simple design problem, task, and solution related to the problem. b. Propose a solution to a design problem that recognizes constraints such as cost, materials, time, space, or safety. c. Use appropriate tools, materials, safe techniques, and quantitative measurements to implement a proposed solution to a design problem. d. Balance simple constraints in carrying out	Students use a systematic process, tools, equipment, and a variety of materials to design and produce a solution or product to meet a specified need, using established criteria. a. Identify appropriate problems for technological design. b. Design a solution or product. c. Communicate a proposed design using drawings and simple models. d. Implement a proposed design. e. Evaluate a completed design or product. f. Suggest improvements for their own and others' designs and try out proposed modifications. g. Communicate the process of technological design, including a review and	Students use a systematic process, tools and techniques, and a variety of materials to design and produce a solution or product that meets new needs or improves existing designs. a. Identify new problems or a current design in need of improvement. b. Generate alternative design solutions. c. Select the design that best meets established criteria. d. Use models and simulations as prototypes in the design planning process. e. Implement the proposed design solution. f. Evaluate the solution to a design problem and the consequences of that solution. g. Communicate the problem, process, and solution to a design problem.

	problem, using oral, written, or pictorial means of communication.	a proposed solution to a design problem. e. Evaluate own design results as well as those of others, using established criteria in their evaluations. f. Modify designs based on results of evaluations. g. Use oral, written, and pictorial means of communication to present the process and result of a design problem.	description of the completed design or product.	

C. <u>The Scientific and Technological Enterprise:</u> Students understand the history and nature of scientific knowledge and technology, the processes of inquiry and technological design, and the impacts science and technology have on society and the environment.

	PK – 2 *PERFORMANCE INDICATOR*	3-5 *PERFORMANCE INDICATOR*	6-8 *PERFORMANCE INDICATOR*	9-Diploma *PERFORMANCE INDICATOR*
C1 Understandings of Inquiry	Students describe the use of questions, and accurate communication in scientists' work. a. Describe how scientific investigations involve asking and answering a question. b. Point out the importance of describing things and investigations accurately so others	Students describe how scientific investigations result in explanations that are communicated to other scientists. a. Describe how scientists develop explanations based on observations, evidence and knowledge of the natural world. b. Describe how scientists make their explanations public.	Students describe how scientists use varied and systematic approaches to investigations that may lead to further investigations. a. Explain how the type of question informs the type of investigation. b. Explain why it is important to identify and control variables, and replicate trials in experiments. c. Describe how scientists' analysis of findings can	Students describe key aspects of scientific investigations: that they are guided by scientific principles and knowledge; that they are performed to test ideas and that they are communicated and defended publicly. a. Describe how hypotheses as well as past and present knowledge guide and influence scientific investigations. b. Describe how scientists defend their evidence and

	can learn about them or repeat them.		lead to new investigations.	explanations using logical arguments and verifiable results.
C2 Understandings About Science and Technology	Students recognize that people have always engaged in science and technology, and that there is a difference between the natural and designed worlds. a. Recognize that people have always had problems and invented tools and ways of doing things to solve problems. b. Distinguish between objects that occur in nature and objects that have been made by people.	Students describe why people use science and technology, and how scientists and engineers work. a. Describe how scientists seek to answer questions and explain the natural world, while engineers seek solutions to problems through the design and production of products.	Students recognize the differences between scientific inquiry and technological design. a. Compare and contrast the processes of scientific inquiry and technological design. b. Explain how constraints and consequences relate to scientific inquiry and technological design.	Students explain how the relationship between the research and knowledge of scientists and, the design process and products of engineers influences the advancement of ideas and designs. a. Provide an example that shows how science advances with the introduction of new technologies and how solving technological problems often impacts new scientific knowledge. b. Provide examples of how creativity, imagination, and a good knowledge base are required to advance scientific ideas and technological design. c. Give examples of how technological solutions to problems sometimes create new problems.
C3 Science, Technology, and Society	No performance indicator. Although no performance indicators are stated students	Students identify and describe the influences of science and technology on people and the environment.	Students describe the relationship of science and technology in addressing personal and societal	Students describe the role of science and technology in creating and solving contemporary issues and

	are expected to have instructional experiences that describe influences of science and technology on their own lives.	a. Explain how science and technology can help people make safe and healthy decisions. b. Give examples of changes in the environment caused by natural or human-made influences. c. Identify that natural resources are limited, and conserving them, decreasing their use and using renewable resources is important.	challenges. a. Identify the challenges to society that science and technology can help address including population, natural hazards, sustainability, personal health, and environmental quality. b. Identify personal choices that can either positively or negatively impact society in such areas as population, ecosystem sustainability, personal health and environmental quality. c. Describe how science and technology are used to address societal concerns related to environmental quality and personal health and safety. d. Identify the factors that influence the development and use of science and technology.	challenges. a. Explain how science and technology influence the *carrying-capacity* and sustainability of the planet. b. Explain how ethical, societal, political, economic, and cultural factors influence personal health, safety and the quality of the environment. c. Explain how ethical, societal, political, economic, religious, and cultural factors influence the development and use of science and technology.
C4 History and Nature of Science	No performance indicator. Although no performance indicators are stated students are expected to have instructional experiences that	No performance indicator. Although no performance indicators are stated students are expected to have instructional experiences that	Students describe how science advances knowledge through the scientists involved, the ways they think about their work and that of others, and through historical examples.	Students describe the human dimensions and traditions of science, the nature of scientific knowledge, and historical episodes in science that impacted science and society.

	describe how people use science in their lives.	describe how science helps us understand the natural world.	a. Describe how women and men of various backgrounds, working in teams or alone but communicating extensively with others, engage in science, engineering and related fields. b. Describe a breakthrough from the history of science that contributes to our current understanding of science. c. Describe the basis for understanding science as a human endeavor that generates explanations based on verifiable evidence and why it is subject to change when new evidence does not match existing explanations.	a. Describe the ethical traditions in science including peer review, truthful reporting, and making results public. b. Select one of the major episodes in the history of science and describe how the scientific knowledge changed over time, and the important effects on science and technology. c. Give examples of how societal, cultural, and personal beliefs and ways of viewing the world could bias scientists. d. Provide examples of criteria that distinguish scientific explanations from pseudoscientific ones.

D. <u>The Physical Setting:</u> Students understand the universal nature of matter, energy, force and motion, and identify how these relationships are exhibited in Earth Systems, in the solar system and throughout the universe.

	PK – 2 *PERFORMANCE INDICATOR*	3-5 *PERFORMANCE INDICATOR*	6-8 *PERFORMANCE INDICATOR*	9-Diploma *PERFORMANCE INDICATOR*
D1 Universe and Solar System	Students describe the movement of objects across the sky, as seen from the Earth.	Students describe the positions and apparent motions of different objects in and beyond our solar system,	Students explain the movements, and describe the location, composition, and characteristics of our solar system and vast	Students explain the physical formation and changing nature of our universe and solar system, and how our past and

	a. Describe how the sun and moon seem to move across the sky. b. Describe the changes in the appearance of the moon from day to day.	and how these objects can be viewed from Earth. a. Show the locations of the sun, earth, moon, and planets and their orbits. b. Observe and report on observations that the sun appears to move across the sky in the same way every day, but its path changes slowly over the seasons. c. Recognize that the sun is a star and similar to other stars in the universe.	universe, including planets, the sun, and galaxies. a. Describe the different kinds of objects in the solar system including planets, sun, moons, asteroids and comets. b. Explain the motions that cause days, years, phases of the moon and eclipses. c. Describe the location of our solar system in its galaxy as well as the existence of other galaxies made up of stars and planets.	present knowledge of the universe and solar system developed. a. Explain why the unit of light years can be used to describe relative distances to objects in the universe. b. Explain the role of gravity in forming and maintaining planets, stars, and the solar system. c. Outline the age, origin and process of formation of the universe as currently understood by science.
D2 Earth	Students describe Earth's weather and surface materials and the different ways they change. a. Explain that the Sun warms the air, water and land. b. Describe the way in which weather changes over months. c. Describe what happens to water left in an open	Students describe the properties of Earth's materials, the processes that change them, and cycles that affect the Earth. a. Explain the effects of the rotation of Earth on the day/night cycle, and how that cycle affects local temperature. b. Describe the various forms water takes in the	Students discuss the various cycles, physical and biological forces and processes, position in space, energy transformations, and human actions that affect short-term and long-term changes to the Earth. a. Recognize that in temperate regions the sun rises higher in the sky during the summer than in the winter, and explain this in relation	Students analyze the biological, physical, energy, and human interactions that shape and alter Earth Systems. a. Explain how solar radiation, ocean currents, and atmospheric conditions influence the habitability of life on Earth. b. Describe factors that

	container compared to water left in a closed container.	air and how that relates to weather. c. Explain how wind, waves, water, and ice reshape the surface of Earth. d. Describe the kinds of material that form rocks and soil. e. Recognize that the sun is the source of Earth's heat and light energy.	to change in the path of the sun and the tilt of Earth's rotational axis relative to the plane of its yearly orbit around the Sun. b. Describe Earth Systems – biosphere, atmosphere, hydrosphere and lithosphere – including some of the cycles and interactions such as water moving among and between them, rocks forming and transforming, and weather formation. c. Give several reasons why the climate is different in different regions of the Earth. d. Discuss the importance and limitations of Earth's resources. e. Describe the effect of gravity on objects on Earth. f. Give examples of both abrupt changes and slow changes in Earth Systems.	influence plate tectonics. c. Describe biological and geophysical influences on the origin and changing nature of Earth Systems. d. Describe human influences on the changing Earth Systems.
D3 Matter and Energy	Students use observable characteristics to describe objects and materials and changes to physical properties of materials. a. Describe objects in terms of	Students describe properties of objects and materials before and after they undergo a change or interaction. a. Describe the relation of the weight of an object	Students describe physical and chemical properties of matter, interactions and changes in matter, and transfer of energy through matter. a. Describe that all matter is	Students describe the structure, behavior, and interactions of matter at the atomic level and the relationship between matter and energy. a. Describe the structure of

	what they are made of and their physical properties. b. Describe changes in properties of materials when mixed, *heated*, frozen, or cut.	and the sum of the weight of its parts. b. Illustrate how many different substances can be made from a small number of basic ingredients by using a description of the properties of original materials and the new material formed. c. Describe what happens when an object or process gives off *heat* and is near a cool object. d. Describe how the *heating* and cooling of water and other materials can change the properties of the materials. e. Explain that the properties of a material may change but the total amount of material remains the same.	made up of atoms and distinguish between/among elements, atoms, and molecules. b. Describe how physical characteristics of elements and types of reactions they undergo have been used to create the Periodic Table. c. Describe the difference between physical and chemical change. d. Explain the relationship of the motion of atoms and molecules to the states of matter for gases, liquids and solids. e. Explain that atoms can be packed together in large arrays that compose all substances including compounds mixtures and solutions. f. Explain that some characteristics of matter including density, boiling point, solubility, are not dependent on the amount of matter present and other characteristics are. g. Use the idea of atoms to explain the conservation of matter. h. Describe several different types of energy forms	atoms in terms of neutrons, protons and electrons. b. Describe how the number and arrangement of atoms in a molecule determines a molecule's properties, including the types of bonds it makes with other molecules and its mass. c. Describe how light is emitted and absorbed by atoms changing energy levels, the results of which can be used to identify a substance. d. Describe factors that affect the rate of chemical reactions. e. Describe nuclear reactions and the energy they release. f. Explain the relationship between kinetic and potential energy. g. Describe that in energy transformations the total amount of energy remains the same but because of inefficiencies heat is usually produced which diffuses by radiation or conduction into cooler places, causing a loss of

			including heat energy, chemical energy, and mechanical energy. i. Use examples of energy transformations from one form to another to explain that energy cannot be created or destroyed j. Explain that *heat* is transferred from one object to another by conduction, convection and/or radiation. k. Describe the properties of solar radiation and its interaction with objects on Earth.	useful energy. h. Describe radioactive decay and half-life. i. Explain the nuclear fusion process that causes stars to produce huge quantities of energy. j. Describe the relationship between *heat*, and *temperature* in terms of the actions of atoms, molecules, and ions.
D4 Force and Motion	Students describe how objects move in different ways. a. Describe different ways things move and what it takes to start an object moving or to keep objects moving. b. Give examples of things that make sound by vibrating.	Students summarize how various forces affect the motion of objects. a. Predict the effect of a given force on the motion of an object. b. Describe the relationship between how fast things move and how long it takes them to go a certain distance. c. Give examples of how gravity, magnets, and electrically charged materials push and pull objects.	Students describe the force of gravity, the motion of objects and the nature of energy in light and waves. a. Describe the kind of motion that sound, earthquake and light waves have in common, and how their motions are different. b. Explain the relationship between visible light, the electromagnetic spectrum and sight. c. Explain how the gravitational force between any two objects would change if the distance	Students understand that the laws of forces and motion are the same across the universe. a. Describe the intellectual developments that have led to our present understanding of the universe structure and motion. b. Describe Newton's concept of gravity, using the motion of galaxies, stars, planets, moons, comets, and various events on Earth as examples. c. Describe the contribution

			between them changed or their mass changed. d. Explain that electric currents and magnets can exert force on each other. e. Describe the effects of different types of force on an object and how unbalanced forces will cause changes in the speed or direction.	of Newton to our understanding of force and motion, and give examples of his three laws of motion. d. Explain the ideas of relative motion and frame of reference. e. Describe some of the conceptual considerations in modern technologies that are based on the interplay of magnetic and electric forces.

E. The Living Environment: Students understand that cells are the basic unit of life, that all life as we know it has evolved through genetic transfer and natural selection to create a great diversity of organisms, and that these organisms create interdependent webs through which matter and energy flow. Students understand their similarities and differences, as humans, to other organisms and their interconnections to these interdependent webs.

	PK – 2 *PERFORMANCE INDICATOR*	3-5 *PERFORMANCE INDICATOR*	6-8 *PERFORMANCE INDICATOR*	9-Diploma *PERFORMANCE INDICATOR*
E1 Biodiversity	Students describe similarities and differences in the observable behaviors, features, and needs of plants and animals. a. Describe similarities and differences in the way plants and animals look and the	Students compare living things based on their behaviors, external features, and environmental needs. a. Describe how living things can be sorted in many ways, depending on which features or behaviors are used to sort them.	Students differentiate among organisms based on biological characteristics, and identify patterns of similarity. a. Compare physical characteristics that differentiate organisms into plants that use sunlight to make their own food, animals that consume	Students analyze the evidence for relatedness among and within diverse populations of organisms, and the importance of biodiversity. a. Explain how the variation in structure and behavior of a population of organisms may influence the likelihood that some

	things that they do. b. Describe some features of plants and animals that help them live in different environments. c. Describe how organisms change during their lifetime.	b. Describe the changes in external features of organism during their life cycles.	energy rich food, and microscopic organisms that cannot be easily classified as either. b. Explain that biologists use internal and external anatomical features to determine relatedness among organisms and to form the basis for classification systems. c. Give the definition of a species for organisms that combine genetic information. d. Explain that external and internal structures of animals and plants contribute to the variety of ways organisms are able to find food and reproduce.	members of the species will have adaptations that allow them to survive in a changing environment. b. Describe the role of DNA sequences in determining the degree of kinship among organisms and the identification of species.
E2 Ecosystems	Students understand how plants and animals depend on each other and the environment they live in. a. Explain that animals use plants and other animals for food, shelter and nesting. b. Compare different animals and plants that live in different parts of the world.	Students describe ways organisms depend upon, interact within, and change the living and nonliving environment as well as ways the environment affects organisms, biomes, and ecosystems. a. Explain how changes in an organism's habitat can influence its survival.	Students examine how the characteristics of the physical, non-living (abiotic) environment, the types and behaviors of living (biotic) organisms, and the flow of matter and energy affect organisms and the ecosystem of which they are part. a. List various kinds of resources within different biomes for which organisms may need to compete.	Students analyze the interactions, cycles, and factors that affect short and long-term ecosystem stability and change. a. Explain why ecosystems can be reasonably stable over hundreds or thousands of years, even though populations may fluctuate. b. Explain dynamic

		b. Describe that organisms all over the Earth are living, dying, decaying and new organisms are being produced by the old ones. c. Describe some of the ways in which organisms depend on one another. d. Explain how the food of most animals can be traced back to plants and how the animal uses food for energy and repair.	b. State the main ways in which two types of organisms may interact including competition, predator/prey, producer/consumer/decomposer, parasitism, mutualism, and state the positive and negative consequences such interactions have. c. Describe the source and flow of energy in the two major food webs, terrestrial and marine. d. Describe how matter and energy change from one form to another in living things and physical environment. e. Explain that the total amount of matter in the environment stays the same as its form and location change.	equilibrium in ecosystems and some factors that can, in the long run, lead to change in the normal pattern of cyclic fluctuations. c. Explain the concept of *carrying capacity* and list factors that determine the amount of life that any environment can support. d. Describe how energy and the chemical elements that make up molecules are transformed in ecosystems, and how they obey basic conservation laws, and explain the crucial role of photosynthesis.
E3 Cells	Students describe parts and wholes of living things, their basic needs, and the structures and processes that help them stay alive. a. List some things that are so small we cannot see them	Students describe how living things are made up of one or more cells and the ways cells help organisms meet their basic needs. a. Give examples of organisms that consist of a single cell and organisms that are	Students describe the hierarchy of organization and function in organisms, and the similarities and differences in structure, function, and needs among and within organisms. a. Describe the basic functions of organisms carried out within cells including the	Students describe structure and function of cells at the intracellular and molecular level including differentiation to form systems, interactions between cells and their environment, and the impact of cellular processes and changes on individuals. a. Describe the similarities

	without using magnifying lenses. b. List the basic things that most organisms need to survive, no matter what their size.	made of a collection of cells. b. Compare how needs of living things are met in single-celled and multi-celled organisms.	extracting of energy from food and the elimination of wastes. b. Explain the relationship among cells, tissues, organs, and organ systems. c. Compare the structures, systems and interactions that allow single-celled organisms and multi-celled plants and animals, including humans, to defend themselves, acquire and use energy, self-regulate, reproduce, and coordinate movement. d. Explain that all living things are composed of cells from just one to millions.	and differences in the basic functions of cell membranes and of the specialized parts within cells that allow them to transport materials, capture and release energy, build proteins, dispose of waste, communicate and move. b. Describe the relation between DNA, protein molecules and amino acids in carrying out the work of cells and how this is similar among all organisms. c. Describe the interactions that lead to cell growth and division (mitosis) and allow new cells to carry the same information as the original cell (meiosis). d. Describe ways in which cells can malfunction and put an organism at risk. e. Describe the role of regulation and the processes that maintain an internal environment amidst changes in the external environment. f. Describe the process of metabolism that allows a few key biomolecules to

				provide cells with necessary materials to perform their functions. g. Describe how cells differentiate to form specialized systems for carrying out life functions.
E4 Heredity and Reproduction	Students describe the cycle of birth, development, and death in different organisms and the ways in which organisms resemble their parents. a. Give examples of how organisms are like their parents and not like them.	Students describe the length and stages of development in humans and other organisms, characteristics of organisms, and the reasons why organisms differ from or are similar to their parents. a. Name some likenesses between children and parents that are inherited, and some that are not.	Students describe the general characteristics and mechanisms of reproduction and heredity in organisms, including humans, and ways in which organisms are affected by their genetic traits. a. Explain that sexual reproduction includes fertilization that results in the inclusion of genetic information from each parent and determines the inherited traits that are a part of every cell. b. Identify some of the risks to the healthy development of an embryo including mother's diet, lifestyle and hygiene. c. Describe asexual reproduction as a process by which all genetic information comes from one parent and determines the inherited traits that are a part of every cell.	Students examine the role of DNA in transferring traits from generation to generation, in differentiating cells and in evolving new species. a. Explain some of the effects of the sorting and recombination of genes in sexual reproduction. b. Describe that genes are segments of DNA that contain instructions for the cells including information that leads to the differentiation of cells and results in varied cell functions in the organism and DNA. c. Explain the possible causes and effects of gene mutations.

	PK-2 *PERFORMANCE INDICATORS*	3-5 *PERFORMANCE INDICATORS*	6-8 *PERFORMANCE INDICATORS*	9-Diploma *PERFORMANCE INDICATORS*
E5 Evolution	Students describe similarities and differences between present day and past organisms that helped them live in their environment. a. Describe some organisms' features that allow them to live in places others cannot. b. Explain how some kinds of organisms that once lived on earth have completely disappeared, although they were something like others that are alive today.	Students describe the fossil evidence and present explanations that help us understand why there are differences among and between present and past organisms. a. Explain advantages and disadvantages of some individuals of the same kind being different in their characteristics and behavior. b. Compare fossils to one another and to living organisms according to their similarities and differences.	Students describe the evidence that evolution occurs over many generations, allowing species to acquire many of their unique characteristics or adaptations. a. Explain how the layers of sedimentary rock and their contained fossils provide evidence for the long history of Earth and for the long history of changing life. b. Describe how small differences between parents and offspring can lead to descendants who are very different from their ancestors. c. Describe how variations in the behavior and traits of an offspring may permit some of them to survive a changing environment. d. Explain that new varieties of cultivated plants and domestic animals can be developed through genetic modification.	Students describe the interactions between species, populations and environments that lead to natural selection and evolution. a. Describe the basic idea of biological evolution, citing evidence from the fossil record and evidence based on the observation of similarities within the diversity of existing organisms. b. Describe the origins of life and how the concept of natural selection provides a mechanism for evolution that can be advantageous or disadvantageous to the next generation. c. Explain why some organism may have characteristics that have no apparent survival or reproduction advantage. d. Relate structural and behavioral adaptations of an organism to its survival in the environment.

SOCIAL STUDIES

The primary purpose of social studies is to develop the ability to make informed and reasoned decisions for the public good as citizens of a culturally diverse, democratic society in an interdependent world (National Council of the Social Studies, 1994, p.3). The great architects of American public education, such as Thomas Jefferson, Horace Mann, and John Dewey, believed that every student must be well versed in the nation's history, the principles and practices which undergird citizenship, and the institutions which define our government. Understandings of commerce and geography were critical to their thinking as well. In essence, Jefferson, Mann, and Dewey viewed the study of social studies as critical to the mission of public schools. Indeed, they would applaud the inclusion of a "responsible and involved citizen" in the Guiding Principles, as well as social studies as one of eight content areas in the *Learning Results*.

A strong social studies education depends upon a clear understanding of its interrelated disciplines. Without knowledge of the geography and economics of earlier times, history offers only lists of people, events, and dates. Without knowledge of history, the institutions of American government and the dynamics of today's global economy are difficult to understand. Although social studies curricula vary in their breadth and depth, the *Learning Results* has adopted a focused definition whereby government, history, geography, and economics stand as the pillars of the content with other disciplines within the social sciences deemed important, but not essential.

Key Ideas in the Social Studies Standards:

Understand - The word “understand” appears in performance indicators throughout. It refers to a variety of different levels on Bloom’s taxonomy and was used intentionally to serve as an umbrella term for the cognitive demand that is described by the descriptors beneath the performance indicators. Look to the descriptors to define the level of cognitive demand for the student performance.

Various -The Social Studies Standards refer to “various" peoples, nations, regions of the world, historical eras, and enduring themes. School administrative units should develop a local curriculum that assists students in gaining a coherent, broad perspective on the variety of peoples, nations, regions, historical eras and enduring themes.

Maine Native Americans - An asterisk follows several performance indicators throughout the document. This asterisk indicates that instruction should include instruction on Maine Native Americans.

Major Enduring Themes - The term “major enduring themes” is used in several places in the Social Studies Standards. This term refers to general topics or issues that have been relevant over a long period of time. Using a consistent set of themes can serve as a framework within which other concepts, topics, and facts can be organized. It can also help students make connections between events within and across historical eras, and use history to help make informed decisions. Four different lists of major themes are provided that schools may select from based on their judgment of which list will best serve the learning of their students. The four lists can be found in the Social Studies portion of the Maine Department of Education website.

Eras – As students develop understanding in civics and government, economics, geography and history the coherent curriculum that school administrative units develop should provide students with a balanced exposure to the major eras of United States and World History. The term "various eras" refers to those eras selected by the SAU that build a cohesive, balanced understanding. The "eras" include:

Eras in United States History	Eras in World History
1. The Americas to 1600 2. The Colonial Era, 1500-1754 3. The Revolutionary Era, 1754-1783 4. Nation Building, 1783-1815 5. The Expanding Nation, 1815-1850 6. Civil War and Reconstruction, 1850-1877 7. Development of the Industrial United States, 1865-1914 8. The Progressive Era, 1890-1914 9. Emergence of the United States as a World Power, 1890-1920 10. The 20's: Prosperity and Problems 11. The Depression and The New Deal, 1929-1941 12. World War II and Post War United States, 1939-1961 13. Contemporary United States, 1961-Present	1. Emergence of Civilization to 1000 BC 2. The Classical Civilizations of the Mediterranean Basin, India, and China, 1000 BC – 600 AD 3. The Expansion and Interaction of Civilizations, 600 AD – 1450 AD 4. The Early Modern World, 1450 – 1800 5. The World in the Nineteenth Century 6. The World in the Contemporary Era

Unity and Diversity - The standards related to Civics and Government, Economics, Geography and History all include performance indicators that address individual, cultural, international and global connections. It will be up to SAUs to determine whether they use these performance indicators as an opportunity to integrate across the disciplines of the social studies or elect to address them separately. In whatever manner SAUs address the instruction related to these performance indicators, it is critical that schools understand the importance of addressing the issues that both unify and divide. The following should help to provide clarity about the ideas related to unity and diversity that are contained in these performance indicators.

Unity and Diversity - The concepts of "unity" and "diversity" apply to the Civics and Government, Economics, Geography and History standards in Social Studies. Unity and diversity have long been valued in the United States as foundations of the unique character of our society. While people throughout our nation's history have come from distinct and varied cultural, political and religious backgrounds and perspectives, they have helped to shape and have participated in our national life based on the shared democratic values represented in our founding documents. We build common bonds of unity based on the democratic values, processes, and institutions that support our democratic way of life. At the same time we recognize the unique contributions, traditions, and perspectives of various groups and cultures. The concepts of unity and diversity also play a role in geography and economics. Diversity and unity influences the settlement and the economics of communities, regions, and nations. For example, in some cases a geographic factor such as a river serves as a resource that may bind a region, community, or a group of people of similar ethnic origins together. Economic systems or activities may unify a community or region; in other cases economic influences may lead to economic diversity. The Social Studies Standards define the essential knowledge related to the concepts of

unity and diversity in the broader umbrella of the performance indicators set forth at B3, C2, D2 and E2 which address Individual, Cultural, International, and Global Connections in each of the four indicators.

Embedded Definition of the Social Studies Disciplines - The first performance indicator of each of these disciplines include a descriptor that provides a definition of each of these disciplines that develops across the grade spans. This series of descriptors provides a developmentally appropriate picture of what is learned in the discipline and should help to ensure that students can distinguish between the disciplines of the Social Studies and what individuals engaged in those areas of study do as well as understand which discipline or combinations of disciplines best address specific topics and issues.

OUTLINE OF SOCIAL STUDIES STANDARDS AND PERFORMANCE INDICATORS

A. Applications of Social Studies Processes, Knowledge, and Skills
    1. Researching and Developing Positions on Current Social Studies Issues
    2. Making Decisions Using Social Studies Knowledge and Skills
    3. Taking Action Using Social Studies Knowledge and Skills
B. Civics and Government
    1. Knowledge, Concepts, Themes and Patterns of Civics/Government
    2. Rights, Duties, Responsibilities, and Citizen Participation in Government
    3. Individual, Cultural, International, and Global Connections in Civics and Government
C. Economics
    1. Economic Knowledge, Concepts, Themes, and Patterns
    2. Individual, Cultural, International, and Global Connections in Economics
D. Geography
    1. Geographic Knowledge, Concepts, Themes, and Patterns
    2. Individual, Cultural, International, and Global Connections in Geography
E. History
    1. Historical Knowledge, Concepts, Themes, and Patterns
    2. Individual, Cultural, International, and Global Connections in History

A. Applications of Social Studies Processes, Knowledge, and Skills: Students apply critical thinking, a research process, and *discipline-based processes* and knowledge from civics/government, economics, geography, and history in *authentic contexts*.

[NOTE: The content area panel felt that the application of social studies processes, knowledge and skills in authentic contexts were of such importance that they are presented as the first strand of the standards.]

	PK - 2 *PERFORMANCE INDICATORS*	3 - 5 *PERFORMANCE INDICATORS*	6 - 8 *PERFORMANCE INDICTORS*	9 - Diploma *PERFORMANCE INDICATORS*
A1 Researching and Developing Positions on Current Social Studies Issues *(L) = Link to future supporting information*	Students identify and investigate research questions related to social studies by locating, organizing, and sharing information. (L) a. Identify questions related to social studies. b. Follow an established procedure for locating sources appropriate to reading level. c. Locate and collect information for a specific purpose from sources including maps, photographs, charts and graphs. d. Organize findings. e. Share information gathered using oral and visual examples.	Students identify and answer research questions related to social studies by locating and selecting information and presenting findings. (L) a. Identify research questions related to social studies - seeking multiple perspectives from varied sources. b. Identify key words and concepts related to research questions c. Locate and access information by using *organizational features*. d. Collect, evaluate and organize for a specific purpose. e. Communicate findings using a variety *of print and non-print sources*. f. Understand plagiarism and demonstrate appropriate	Students research, select, and present a position on a *current social studies issue* by proposing and revising research questions, and locating and selecting information from multiple and varied sources. (L) a. Propose and revise research questions related to a *current social studies issue*. b. Determine the nature and extent of information needed. c. Locate and access relevant information that includes multiple perspectives from varied sources. d. Demonstrate facility with note-taking, organizing information, and creating bibliographies. e. Distinguish between	Students research, develop, present, and defend positions on a *current social studies issues* by developing and modifying research questions, and locating, selecting, evaluating, and synthesizing information from multiple and varied sources. (L) a. Develop research questions related to *current social studies issues.* b. Select and apply research methods that suit the purpose of the inquiry. c. Make judgments about conflicting sources, incorporating those that are valid and refuting others. d. Synthesize information from varied sources that reflect multiple

	PK - 2 *PERFORMANCE INDICATORS*	3 - 5 *PERFORMANCE INDICATORS*	6 - 8 *PERFORMANCE INDICTORS*	9 - Diploma *PERFORMANCE INDICATORS*
		citation. g. Distinguish between facts and opinions/interpretations in sources.	*primary and secondary sources*. f. Evaluate and verify the credibility of the information found in *print and non-print sources.* g. Use additional sources to resolve contradictory information. h. Summarize and interpret information found in various sources. i. Select a clear supportable position. j. Present a well-supported position to a *variety of audiences*. k. Use appropriate tools, methods, and sources from government, history, geography, economics or related fields. l. Demonstrate the ethical and legal use of information.	perspectives. e. Utilize media relevant to audience and purpose that extend and support oral, written, and visual communication. f. Integrate paraphrasing, quotations and *citations* into a written text that maintains the flow of ideas. g. Develop a clear well - supported position. h. Present and defend a well-supported position to a *variety of audiences* using a prescribed format. i. Select and use appropriate tools, methods, and sources from government, history, geography, economics or related fields, including *ethical reasoning skills*. j. Access and present information ethically and legally.

	PK-2 *PERFORMANCE INDICATORS*	3-5 PERFORMANCE INDICATOR	6-8 PERFORMANCE INDICATOR	9-Diploma PERFORMANCE INDICATOR
A2 Making Decisions Using Social Studies Knowledge and Skills *(L) = Link to future supporting information*	Students make individual and collaborative decisions on matters related to social studies using research and discussion skills. a. Share ideas and listen to the ideas of others to reach individual and collaborative decisions and make plans. b. Make a *real or simulated decision* related to the classroom, school, or beyond by applying appropriate and relevant social studies skills, including research skills and relevant information. (L)	Students make individual and collaborative decisions on matters related to social studies using relevant information, and research and discussion skills. a. Contribute equitably to collaborative discussions, examine alternative ideas, and work cooperatively to share ideas and individually and collaboratively develop a decision or plan. b. Make a *real or simulated decision* related to the classroom, school, community, or civic organization by applying appropriate and relevant social studies knowledge and skills, including research skills and other relevant information. (L)	Students make individual and collaborative decisions on matters related to social studies using relevant information, and research and discussion skills. a. Develop individual and collaborative decisions or plans by contributing equitably to collaborative discussions, seeking and examining alternative ideas, and considering the pros and cons of each, thoughtfully and respectfully recognizing the contributions of other group members. b. Make a *real or simulated decision* related to the classroom, school, community, civic organization, Maine, or beyond by applying appropriate and relevant social studies knowledge and skills, including research skills, and other relevant information. (L)	Students make individual and collaborative decisions on matters related to social studies using relevant information, and research, discussion, and *ethical reasoning skills*. a. Develop individual and collaborative decisions or plans by considering multiple points of view - weighing pros and cons, building on the ideas of others, and sharing information in an attempt to persuade the opinions of others. b. Make a *real or simulated decision* related to the classroom, school, community, civic organization, Maine, United States, or international entity by applying appropriate and relevant social studies knowledge and skills, including research and *ethical reasoning skills*, and other relevant information. (L)

Comment [MM1]: You may decide to over-rule the inclusion of "individual" as well as collaborative decisions again, but in authentic contexts we do both--not just collaborative decision-making.

	PK – 2 PERFORMANCE INDICATOR	3-5 PERFORMANCE INDICATOR	6-8 PERFORMANCE INDICATOR	9-Diploma PERFORMANCE INDICATOR
A3 Taking Action Using Social Studies Knowledge and Skills	Students select and participate in a civic action or service-learning project based on a classroom or school asset or need, and describe the project's potential civic contribution. (L)	Students select and participate in a civic action or service-learning project based on a classroom, school or local community asset or need, and describe evidence of the project's effectiveness and civic contribution. (L)	Students select, plan, and participate in a civic action or service-learning project based on a school, community, or state asset or need, and analyze the project's effectiveness and civic contribution. (L)	Students select, plan, and participate in a civic action or service-learning project based on a community, school, state, national, or international asset or need, and evaluate the project's effectiveness and civic contribution. (L)

B. Civics and Government: Students draw on concepts from civics and government to understand political systems, power, authority, governance, civic ideals and practices, and the role of citizens in the community, state, nation, and world.

	PK - 2 *PERFORMANCE INDICATORS*	3 - 5 *PERFORMANCE INDICATORS*	6 - 8 *PERFORMANCE INDICTORS*	9 - Diploma *PERFORMANCE INDICATORS*
B1 Knowledge, Concepts, Themes and Patterns of Civics/ Government *(L) = Link to future supporting information*	Students understand key ideas and processes that characterize democratic government in the community and the United States. a. Describe and provide examples of *democratic ideals*. b. Recognize symbols, monuments, celebrations, and leaders of local state, and national government.	Students understand the basic ideals, purposes, principles, structures, and processes of democratic government in Maine and the United States. a. Explain that the study of government includes how governments are organized and how citizens participate. b. Explain and provide examples of *democratic ideals* and *constitutional principles* to include the rule of law, legitimate power,	Students understand the basic ideals, purposes, principles, structures, and processes of constitutional government in Maine and the United States as well as examples of other forms of government in the world. a. Explain that the study of government includes the *structures* and functions of government and the political and civic activity of citizens. b. Analyze examples of	Students understand the ideals, purposes, principles, structures, and processes of constitutional government in the United States and the American political system, as well as examples of other forms of government and political systems in the world. a. Explain that the study of government includes the *structures*, functions, institutions, and forms of government and the relationship of government

	PK - 2 *PERFORMANCE INDICATORS*	3 - 5 *PERFORMANCE INDICATORS*	6 - 8 *PERFORMANCE INDICTORS*	9 - Diploma *PERFORMANCE INDICATORS*
	c. Identify community workers and volunteers and the roles they play in promoting the common good.	and common good. c. Explain and give examples of *governmental structures* including the legislative, executive and judicial branches and the local, state, and national levels of government. d. Explain how leaders are elected and how laws are made and implemented. e. Explain that the *structures* and processes *of government* are described in such documents as the constitutions of Maine and the United States.	*democratic ideals* and *constitutional principles* to include the rule of law, legitimate power, and common good. c. Describe the *structures* and processes of United States government and government of the state of Maine and how these are framed by the United States Constitution, Maine Constitution and other primary sources. d. Explain the concepts of federalism and checks and balances and the role these concepts play in the governments of the United States and Maine as framed by the United States Constitution, the Maine Constitution and other primary sources as guides. e. Compare how laws are made in Maine and at the federal level in the United States. f. Compare the *structures* and processes of United	to citizens in the United States and other regions of the world. b. Evaluate *current issues* by applying *democratic ideals* and *constitutional principles* of government in the United States, including checks and balances; federalism; and consent of the governed as put forth in *founding documents*. c. Explain how and why democratic institutions and interpretations of *democratic ideals* and *constitutional principles* change over time. d. Describe the purpose, structures, and processes of the *American political system*. e. Compare the *American political system* with examples of political systems from other parts of the world.

	PK - 2 *PERFORMANCE INDICATORS*	3 - 5 *PERFORMANCE INDICATORS*	6 - 8 *PERFORMANCE INDICTORS*	9 - Diploma *PERFORMANCE INDICATORS*
			States government with examples of other forms of government.	
B2 Rights, Duties, Responsibili-ties, and Citizen Participation in Government	Students understand the concepts of *rights, duties, responsibilities,* and participation. a. Describe the exercise of classroom *rights, duties and responsibilities* including participating in some classroom decisions and being obliged to follow classroom rules. b. Explain the purpose of classroom rules and laws encountered in daily experiences to promote the common good and the peaceful resolution of conflict.	Students understand the basic *rights, duties, responsibilities,* and roles of citizens in a democracy. a. Identify the *rights, duties and responsibilities* of citizens within the class, school, or community. b. Identify and describe the United States Constitution and Bill of Rights as documents that establish government and protect the rights of United States citizens. c. Provide examples of how people influence government and work for the common good to include voting, writing legislators, community service, and civil disobedience.	Students understand constitutional and legal *rights,* civic *duties and responsibilities*, and roles of citizens in a constitutional democracy. a. Explain the constitutional and legal status of "citizen" and provide examples of *rights, duties and responsibilities* of citizens. b. Describe how the powers of government are limited to protect individual rights and minority rights as described in the United States Constitution and the Bill of Rights. c. Analyze examples of the protection of rights in court cases or examples from current events. d. Analyze how people influence government and work for the common good to include voting, writing legislators, community	Students understand the constitutional and legal *rights*, the civic *duties and responsibilities,* and roles of citizens in a democratic republic and the role of citizens living under other forms of government in the world. a. Explain the relationship between constitutional and legal *rights*, and civic *duties and responsibilities* in a democratic republic. b. Evaluate the relationship between the government and the individual as evident in the United States Constitution, the Bill of Rights and landmark court cases. c. Analyze the *constitutional principles* and the roles of the citizen and the government in major laws or cases. d. Compare the *rights, duties*

	PK - 2 *PERFORMANCE INDICATORS*	3 - 5 *PERFORMANCE INDICATORS*	6 - 8 *PERFORMANCE INDICTORS*	9 - Diploma *PERFORMANCE INDICATORS*
			service, and civil disobedience.	*and responsibilities* of United States citizens with examples from other nations. e. Evaluate how people influence government and work for the common good to include voting, writing legislators, community service, and civil disobedience.
B3 Individual, Cultural, International, and Global Connections in Civics and Government *(L) = Link to future supporting information*	Students understand civic aspects of classroom traditions and decisions, and the traditions of various cultures.* a. Identify and compare their similar and differing interests and opinions related to classroom traditions and decisions. b. Compare traditions that are similar across the nation and those that differ in various cultural groups.	Students understand civic aspects of unity and diversity in the daily life of various cultures in the United States and the world.* (L) a. Identify examples of unity and diversity in the United States that relate to how laws protect individuals or groups to support the common good. b. Describe civic beliefs and activities in the daily life of diverse cultures, including Maine Native Americans and various cultures in the United States and the world.	Students understand political and civic aspects of unity and diversity in Maine, the United States, and various world cultures.* (L) a. Explain basic constitutional, political, and civic aspects of historical or *current issues* that involve unity and diversity in Maine, the United States, and other nations. b. Describe the *political structures* and civic responsibilities within diverse cultures, including Maine's Native Americans,	Students understand political and civic aspects of unity and diversity in Maine, the United States, and the world.* (L) a. Analyze the constitutional, political, and civic aspects of historical or *current issues* that involve unity and diversity in Maine, the United States and other nations. b. Analyze the *political structures*, political power, and political perspectives of diverse cultures, including those of Maine and other Native Americans, various

	PK - 2 *PERFORMANCE INDICATORS*	3 - 5 *PERFORMANCE INDICATORS*	6 - 8 *PERFORMANCE INDICTORS*	9 - Diploma *PERFORMANCE INDICATORS*
			various *historical and recent immigrant groups* in the United States, and various cultures in the world.	*historical and recent immigrant groups* in Maine, and the United States, and those of various world cultures.

C. Economics: Students draw on concepts and processes from economics to understand issues of *personal finance* and issues of production, distribution, and consumption in the community, state, nation, and world.

	PK -- 2 *PERFORMANCE INDICATORS*	3 -- 5 *PERFORMANCE INDICATORS*	6 -- 8 *PERFORMANCE INDICTORS*	9 -- Diploma *PERFORMANCE INDICATORS*
C1 Economic Knowledge, Concepts, Themes, and Patterns *(L) = Link to future supporting information*	Students understand the nature of economics as well as key foundation ideas. (L) a. Describe economics as how people make choices about how to use *scarce resources* to meet their wants and needs. b. Describe how money is earned and managed in order to buy *goods and services* and save for the future.	Students understand personal economics and the basis of the economies of the community, Maine, the United States and various regions of the world. (L) a. Explain that economics includes the study of scarcity which leads to economic choices about what *goods and services* will be produced; how they will be distributed; and for whom they will be produced. b. Explain how *entrepreneurs* and other producers of	Students understand the principles and processes of personal economics, the influence of economics on personal life and business, and the *economic systems* of Maine, the United States, and various regions of the world. (L) a. Explain that economics is the study of how scarcity requires choices about what, how, for whom, and in what quantity to produce, and about how scarcity relates to *market economy,*	Students understand the principles and processes of personal economics, the role of markets, the *economic system* of the United States, and other *economic systems* in the world, and how economics serves to inform decisions in the present and future. (L) a. Explain that the study of economics includes the analysis and description of production, distribution, and consumption of *goods and services* by business, and is the basis of

	PK -- 2 *PERFORMANCE INDICATORS*	3 -- 5 *PERFORMANCE INDICATORS*	6 -- 8 *PERFORMANCE INDICTORS*	9 -- Diploma *PERFORMANCE INDICATORS*
		goods and services help satisfy the wants and needs of consumers in a *market economy*, both local and national, by using *natural, human*, and *capital resources*. c. Students describe situations in which personal choices are related to the use of financial resources and financial institutions including the use of money, consumption, savings, investment, and banking.	*entrepreneurship, supply and demand,* and *personal finance.* b. Describe the functions of *economic institutions* and *economic processes* including financial institutions, businesses, government, taxing and trade. c. Identify factors that contribute to personal spending and savings decisions including work, wages, income, expenses, and budgets as they relate to the study of individual financial choices.	individual *personal finance* management including saving and investment. b. Explain and analyze the role of financial institutions, the stock market, and government, including *fiscal, monetary, and trade policies*, in personal, business, and national economics. c. Evaluate different forms of money management, and the positive and negative impacts that credit can have on individual finances using *economic reasoning*. d. Identify and explain various *economic indicators* and how they represent and influence economic activity. e. Analyze economic activities and policies in relationship to freedom, efficiency, equity, security, growth, and sustainability. f. Explain and apply the concepts of *specialization, economic*

	PK -- 2 *PERFORMANCE INDICATORS*	3 -- 5 *PERFORMANCE INDICATORS*	6 -- 8 *PERFORMANCE INDICTORS*	9 -- Diploma *PERFORMANCE INDICATORS*
				interdependence, and *comparative advantage*. g. Solve problems using the theory of *supply and demand.*
C2 Individual, Cultural, International, and Global Connections in Economics	Students understand the influence of economics on individuals and groups in the United States and the world. * a. Identify examples of how individuals, families, and communities, are influenced by *economic factors.* b. Describe work and contribution of various groups to the economics of the local community in the past and present.	Students understand economic aspects of unity and diversity in the community, Maine, and regions of the United States and the world.* (L) a. Describe economic similarities and differences within the community, Maine, and the United States. b. Identify *economic processes*, *economic institutions*, and economic influences related to Maine Native Americans and various cultures in the United States and the world.	Students understand economic aspects of unity and diversity in Maine, the United States, and various world cultures. * (L) a. Describe factors in *economic development*, and how states, regions, and nations have worked together to promote economic unity and interdependence. b. Describe the economic aspects of diverse cultures, including Maine Native Americans, various historical and recent immigrant groups in the United States, and various cultures in the world.	Students understand economic aspects of unity and diversity in Maine, the United States, and the world. * (L) a. Analyze the role of regional, international, and global organizations that are engaged in *economic development.* b. Compare a variety of *economic systems* and the *economic development* of Maine, the United States, and various regions of the world that are economically diverse. c. Analyze wealth, poverty, resource distribution and other *economic factors* of diverse cultures, including Maine and other Native Americans, various historical and recent immigrant groups in Maine

	PK -- 2 *PERFORMANCE INDICATORS*	3 -- 5 *PERFORMANCE INDICATORS*	6 -- 8 *PERFORMANCE INDICTORS*	9 -- Diploma *PERFORMANCE INDICATORS*
				and the United States, and various world cultures.

D. Geography: Students draw on concepts and processes from geography to understand issues involving people, places, and environments in the community, state, nation, and world.

	PK -- 2 PERFORMANCE INDICATORS	3 -- 5 PERFORMANCE INDICATORS	6 -- 8 PERFORMANCE INDICTORS	9 -- Diploma PERFORMANCE INDICATORS
D1 Geographic Knowledge, Concepts, Themes, and Patterns *(L) = Link to future supporting information*	Students understand the nature of geography and key foundation ideas. a. Explain that geography is the study of the earth's surface and peoples. b. Create visual representations of the immediate neighborhood and community. c. Identify local and distant *places,* and *locations*, directions including N, S, E, W, and basic physical, environmental, and cultural features using basic maps and globes. (L)	Students understand the geography of the community, Maine, the United States, and various regions of the world. a. Explain that geography includes the study of earth's physical features including climate and the distribution of plant, animal, and human life. b. Create visual representations of the world, showing a basic understanding of the *geographic grid*, including the equator and prime meridian. c. Identify the earth's major geographic features such as	Students understand the geography of the community, Maine, the United States, and various regions of the world, and the geographic influences on life in the past, present and future. a. Explain that geography includes the study of physical, environmental, and cultural features of the state, nation and various regions of the world to identify consequences of geographic influences and make predictions. b. Use the *geographic grid* and a variety of *types of maps* to gather geographic	Students understand the geography of the United States and various regions of the world and the effect of geographic influences on decisions about the present and future. a. Students explain that geography includes the study of physical, environmental, and cultural features at the local, state, national, and global levels in order to better predict and evaluate consequences of geographic influences. b. Describe the major regions of the earth and their major physical,

		continents, oceans, major mountains, and rivers using a variety of *geographic tools*. d. Explain examples of changes in the earth's physical features and the impact on communities and regions.	information. c. Identify the major regions of the earth and their major physical features and political boundaries using a variety of *geographic tools*. d. Describe the impact of change, including technological change, on the physical and cultural environment.	environmental and cultural features using a variety of *geographic tools*. c. Analyze local, national, and global geographic data on physical, environmental, and cultural processes that shape and change places and regions. d. Evaluate the impact of change, including technological change, on the physical and cultural environment.
D2 Individual, Cultural, International, and Global Connections in Geography *(L) = Link to future supporting information*	Students understand the influence of geography on individuals and groups in the United States and the world.* a. Identify the impacts of geographic features on individuals, families, and communities in the United States and various other nations.	Students understand geographic aspects of unity and diversity in the community, Maine, and regions of the United States and the world.* (L) a. Identify examples of how geographic features unify communities and regions as well as support diversity. b. Describe impacts of geographic features on the daily life of various cultures, including Maine Native Americans and other cultures in the United States and the world.	Students understand geographic aspects of unity and diversity in Maine, the United States, and various world cultures.* (L) a. Explain geographic features that have impacted unity and diversity in Maine, the United States, and other nations. b. Describe the dynamic relationship between geographic features and various cultures, including the cultures of Maine Native Americans, various historical and recent	Students understand geographic aspects of unity and diversity in Maine, the United States, and the world.* (L) a. Analyze geographic features that have impacted unity and diversity in the United States and other nations and describe their effects. b. Analyze the dynamic relationship between geographic features and various cultures, including the cultures of Maine and other Native Americans, various historical and recent immigrant groups in

			immigrant groups in the United States, and other cultures in the world.	the United States, and other cultures in the world.

E. History: Students draw on concepts and processes from history to develop *historical* perspective and understand issues of continuity and change in the community, state, nation, and world.

	PK - 2 *PERFORMANCE INDICATORS*	3 -5 *PERFORMANCE INDICATORS*	6 - 8 *PERFORMANCE INDICTORS*	9 - Diploma *PERFORMANCE INDICATORS*
E1 Historical Knowledge, Concepts, Themes, and Patterns *(L) = Link to future supporting information*	Students understand the nature of history as well as key foundation ideas. a. Describe history as "stories" of the past. b. Identify a few key figures and events from personal history, and the history of the community, Maine, and the United States, especially those associated with historically based traditions. c. Identify past, present, and future in stories, pictures, poems, songs, or videos. d. Apply terms such as before and after in sequencing events.	Students understand various major eras in the history of the community, Maine, and the United States. a. Explain that history includes the study of past human experience based on available evidence from a variety of sources. b. Identify various major *historical* eras, major enduring themes, turning points, events, consequences, persons, and timeframes, in the history of the community, Maine, and the United States. (L) c. Trace and explain how the history of democratic principles is preserved in	Students understand major eras, major enduring themes, and *historic* influences in the history of Maine, the United States and various regions of the world. a. Explain that history includes the study of past human experience based on available evidence from a variety of sources and can help one better understand and make informed decisions about the present and future. b. Identify and analyze major *historical* eras, major enduring themes, turning points, events, consequences, and people in the history of	Students understand major eras, major enduring themes, and *historic* influences in United States and world history, including the roots of democratic philosophy, ideals, and institutions in the world. a. Explain that history includes the study of the past based on the examination of a variety of *primary and secondary sources* and can help one better understand and make informed decisions about the present and future. b. Analyze and critique major *historical* eras, major enduring themes, turning points, events,

	PK - 2 *PERFORMANCE INDICATORS*	3 -5 *PERFORMANCE INDICATORS*	6 - 8 *PERFORMANCE INDICTORS*	9 - Diploma *PERFORMANCE INDICATORS*
	e. Create a brief *historical* account about family, the local community, or the nation by using artifacts, photographs, or stories of the past.	*historic symbols, monuments and traditions* important in the community, Maine, and the United States. (L)	Maine, the United States and various regions of the world. c. Trace and explain the history of *democratic ideals* and *constitutional principles* and their importance in the history of the United States and the world. d. Analyze interpretations of *historical* events that are based on different perspectives, and evidence.	consequences, and people in the history of the United States and world and the implications for the present and future. c. Trace and critique the roots and evolution of *democratic ideals* and *constitutional principles* in the history of the United States and the world using historical sources. d. Analyze and critique varying interpretations of *historic* people, issues, or events, and explain how evidence is used to support different interpretations.
E2 Individual, Cultural, International, and Global Connections in History *(L) = Link to*	Students understand *historical* aspects of the uniqueness and commonality of individuals and groups.* a. Explain how individuals, families, and communities, share both common and unique aspects of culture, values and beliefs	Students understand *historical* aspects of unity and diversity in the community, Maine, and the United States.* (L) a. Describe examples in the history of the United States of both diversity and shared values and traditions. b. Describe various cultural traditions and contributions	Students understand *historical* aspects of unity and diversity in Maine, the United States, and various world cultures.* (L) a. Explain how both unity and diversity have had important roles in the history of Maine, the United States, and other nations.	Students understand *historical* aspects of unity and diversity in the United States and the world.* (L) a. Identify and critique issues characterized by unity and diversity in the history of the United States and other nations, and describe their effects.

	PK - 2 *PERFORMANCE INDICATORS*	3 -5 *PERFORMANCE INDICATORS*	6 - 8 *PERFORMANCE INDICTORS*	9 - Diploma *PERFORMANCE INDICATORS*
future supporting information	through stories, traditions, religion, celebrations, or the arts. b. Describe traditions of Maine Native Americans and various *historical and recent immigrant groups* and traditions common to all.	of Maine Native Americans, various *historical and recent immigrant groups* in the community, Maine, and the United States.	b. Identify and compare a variety of cultures through time, including comparisons of native and immigrant groups in the United States, and eastern and western societies in the world. c. Describe major turning points and events in the history of Maine Native Americans, various *historical and recent immigrant groups* in Maine, the United States, and other cultures in the world.	b. Identify and analyze major turning points and events in the history of Native Americans, various *historical and recent immigrant groups* in the United States, and other cultures in the world.

* Maine Native Americans - An asterisk follows several performance indicators throughout the document. This asterisk indicates that instruction should include instruction on Maine Native Americans.

VISUAL AND PERFORMING ARTS

The visual and performing arts are an essential part of every child's education. Engagement in the visual and performing arts deepens students' overall knowledge and skills, as well as their social and emotional development. Research shows that students involved in the visual and performing arts are more successful in school, more involved in their communities and perform better on standardized tests.

The National Standards For Arts Education include separate standards for dance, music, theater, and visual arts. In 1997, the National Assessment of Educational Progress (NAEP) Arts assessment was developed with separate assessments in these disciplines. These four visual and performing arts disciplines are uniquely different from each other in literacy as well as creation and performance. The Visual and Performing Arts segment of the Maine *Learning Results* includes four separate strands (dance, music, theater and visual arts) for Standards A and B. Standards C, D, and E are representative of skills and knowledge of all four disciplines of the Visual and Performing Arts. This format best represents both the unique and common aspects of the visual and performing arts.

These Visual and Performing Arts Standards outline a comprehensive pathway for every high school graduate to exhibit proficiency in one or more of the Visual and Performing Arts disciplines (dance, music, theater, visual arts). The key to success is local commitment to the Visual and Performing Arts. The differences in staffing, scheduling, and resources vary from district to district. A shift in the perceived value of a Visual and Performing Arts education might be required in order to implement a comprehensive Visual and Performing Arts education curriculum that meets the needs of every student. Connecting the Visual and Performing Arts with other content areas of the curriculum improves teaching and learning.

This document guides school districts to develop comprehensive and sequential standards-based Visual and Performing Arts curricula for student learning. The use of these standards may assist in the improvement of instruction, generally, and impact student learning, not only in the Visual and Performing Arts but in other content areas, as well.

> Standards A & B - The Visual and Performing Arts segment of the Maine *Learning Results* includes four separate strands (dance, music, theater and visual arts) for Standards A and B. The purpose of these separate strands is to individually outline the essential components for the creation of instruction and curriculum in each of the disciplines of the visual and performing arts. This guidance honors the unique literacy and expression content of each of the four disciplines. The decision about the breadth of the programming in the visual and performing arts resides with the school administrative units.

OUTLINE OF VISUAL AND PERFORMING ARTS STANDARDS AND PERFORMANCE INDICATORS

A. Disciplinary Literacy
- Dance: Terminology, Space, Time, Energy, Locomotor and Non-Locomotor Movement, Compositional Forms
- Music: Music Difficulty, Notation and Terminology, Observe, Listen and Describe
- Theater: Terminology, Production
- Visual Arts: Artist's Purpose, Elements of Art and Principles of Design, Media, Tools, Techniques and Processes

B. Creation, Performance, and Expression
- Dance: Communication, Sequencing, Solving Challenges, Technical Aspects
- Music: Style/Genre, Composition
- Theater: Movement, Character, Improvisation
- Visual Arts: Media Skills, Composition Skills, Making Meaning, Exhibition

C. Creative Problem Solving
1. Application of Creative Process

D. Aesthetics and Criticism
1. Aesthetics and Criticism

E. Relationships Among the Arts, History and World Culture; and Make Connections Among the Arts and Other Disciplines, Daily Life, Goal Setting, and Interpersonal Interaction
1. The Arts and History and World Cultures
2. The Arts and Other Disciplines
3. Goal Setting
4. Impact of the Arts on Lifestyle and Career
5. Interpersonal Skills

A. Disciplinary Literacy - Dance: Students show literacy in the discipline through understanding or demonstration of concepts, skills, terminology, and processes.

	PK-2 *PERFORMANCE INDICATORS*	3-5 *PERFORMANCE INDICATORS*	6-8 *PERFORMANCE INDICATORS*	9-Diploma *PERFORMANCE INDICATORS*
A1 Terminology	Students identify *space, time,* and *energy* concepts. a. *Space* – level, direction, personal (self) space, wide, narrow; stretched, curled and twisted shape. b. *Time* – steady beat and fast/slow. c. *Energy*- hard/soft, light/strong, resting/moving.	Students identify and describe the dance concepts of *time, space, energy*, and *composition form*. a. *Space* – pathway straight, curved, zig-zag, spiral; positive and negative space. b. *Time* – steady beat, tempo changes. c. *Energy* – sustained/abrupt. d. *Composition form* – patterns. e. *Style/tradition* – specific dances students learn from different cultures and/or their own.	Students identify and describe the dance terms of *time, composition*, and *style/tradition*. a. *Time* – complex meters. b. *Composition* – phrasing. c. *Style/tradition* – specific dances students learn from different cultures and/or their own. d. *Energy* - bound/free, tension/relaxation, indirect/direct.	Students identify and describe the dance terms of *composition,* intention, *narrative, dynamics, motif*, and *variation.*
A2 Space	Students demonstrate *space* concepts. a. High/low. b. Forward/backward. c. Near/far. d. Wide/narrow, stretched, curled, twisted shapes.	Students use *space* concepts to solve movement challenges. a. Pathway–straight, curved, zig-zag, spiral. b. Positive and negative space.	Students apply *space* concepts in a repeatable movement phrase.	Students apply *space* concepts in an original repeatable, choreographed piece.

	PK-2 *PERFORMANCE INDICATORS*	3-5 *PERFORMANCE INDICATORS*	6-8 *PERFORMANCE INDICATORS*	9-Diploma *PERFORMANCE INDICATORS*
A3 Time	Students replicate tempo change using body movement.	Students identify and replicate a steady beat in varied tempos using body movement.	Students move to complex rhythm patterns and syncopation.	Students identify and move to rhythms of various *genres*.
A4 Energy	Students recognize and demonstrate the energy qualities of hard/soft, light/strong, and resting/moving movements.	Students recognize and demonstrate the energy qualities of sustained and abrupt movements.	Students explain and incorporate energy qualities of bound/free, tension/relaxation, indirect/direct movements.	Students incorporate energy qualities into a choreographed piece as a solo, small group, or ensemble.
A5 Locomotor and Non-Locomotor Movement	Students demonstrate *locomotor* and *non-locomotor* skills. a. Tell the difference between a *locomotor and non-locomotor/axial* skill. b. Demonstrate *locomotor* patterns using change in direction, level, and pathway. c. Demonstrate *non-locomotor* skills.	Students demonstrate expressive combinations of *locomotor* and *non-locomotor* skills. a. Demonstrate combinations of *locomotor* patterns, with changes in direction, level, and path. b. Demonstrate a combination of *locomotor* and/or *axial skills* into a pattern that may change direction, level, energy, or pathway. (L) c. Demonstrate combinations of *non-locomotor* skills.	Students integrate technical skills of *skeletal alignment*, strength, agility, and coordination.	Students integrate technical skills of *skeletal alignment, body-part isolation*, strength, flexibility, agility, and coordination.

	PK-2 *PERFORMANCE INDICATORS*	3-5 *PERFORMANCE INDICATORS*	6-8 *PERFORMANCE INDICATORS*	9-Diploma *PERFORMANCE INDICATORS*
A6 Compositional Forms	Students replicate, with a partner, the dance *composition forms* of copying, mirroring, leading, and following.	Students replicate *dance movement*.	Students replicate *dance phrase*.	Students replicate dance *composition forms* and themes, including *narrative, canon, call and response, ab, aba, rondo, retrograde, palindrome,* and *theme and variation*.

A. Disciplinary Literacy – Music: Students show literacy in the discipline by understanding and demonstration of concepts, skills, terminology, and processes.

	PK-2 *PERFORMANCE INDICATORS*	3-5 *PERFORMANCE INDICATORS*	6-8 *PERFORMANCE INDICATORS*	9-Diploma *PERFORMANCE INDICATORS*
A1 Music Difficulty	Students accurately perform short musical pieces, both instrumentally and vocally, as part of a group while modeling proper posture and *technique,* alone and with others.	Students accurately perform music in easy keys, *meters,* and rhythms with limited ranges, both instrumentally and vocally, while modeling proper posture and *technique*, alone or with others.	Students accurately perform music that includes changes of tempo, key, and *meter* in modest ranges with moderate technical demands modeling proper posture and *technique* alone or with others.	Students perform music that requires well-developed technical skills, attention to phrasing and interpretation, and the ability to perform various *meters* and rhythms in a variety of keys while modeling proper posture and *technique* alone or with others.

	PK-2 *PERFORMANCE INDICATORS*	3-5 *PERFORMANCE INDICATORS*	6-8 *PERFORMANCE INDICATORS*	9-Diploma *PERFORMANCE INDICATORS*
A2 Notation and Terminology	Students identify and read musical notation, symbols, and terminology of *dynamics*. a. Read whole and half notes in 4/4 meter signatures. b. Identify symbols and traditional terms referring to *dynamics*.	Students identify and read musical notation, symbols, and terminology of *dynamics*. a. Read whole, half, dotted half, quarter, and eighth notes and rests in 2/4, 3/4, and 4/4 meter signatures. b. Identify symbols and traditional terms referring to *dynamics*, tempo, and articulation.	Students apply accumulated knowledge of musical notation, symbols, and terminology to a music performance. a. Read whole, half, quarter, eighth, sixteenth, and dotted notes and rests in 2/4, 3/4, 4/4, 6/8, and 3/8 meter signatures b. Read simple melodies in both the treble and bass clefs c. Apply notation symbols for pitch, rhythm, *dynamics*, tempo, articulation, and expression	Students apply accumulated knowledge of musical notation, symbols, and terminology to perform music with greater complexity and variation including sudden *dynamic* contrasts.
A3 Observe, Listen, and Describe	Students listen to and identify qualities/elements of music including loud/soft, fast/slow, high/low, *meter*, and long/short, steady beat/strong beat, and simple *form*.	Students listen to and describe simple examples of music qualities/elements including pitch, rhythm, tempo, *dynamics, form, timbre, meter*, phrases, style, harmony major, and minor.	Students listen to and compare qualities/elements of music, including pitch, rhythm, tempo, *dynamics, form, timbre*, texture, harmony, style, and *compound meter*.	Students listen to, analyze, and evaluate music using their understanding of *compound meter*, pitch, rhythm, tempo, *dynamics, form, timbre*, texture, harmony, and style.

A. Disciplinary Literacy – Theater: Students show literacy in the art discipline by understanding and demonstration of concepts, skills, terminology, and processes.

	PK-2 *PERFORMANCE INDICATORS*	3-5 *PERFORMANCE INDICATORS*	6-8 *PERFORMANCE INDICATORS*	9-Diploma *PERFORMANCE INDICATORS*
A1 Terminology	Students identify who, what, where, when, and why in a dramatic performance they have participated in or seen.	Students describe theater terms including *stage directions*, rehearsal, plot, gesture, director, motivation, conflict, improvisation, and *blocking*.	Students identify and explain theater terms and concepts including *stage business*, ad-libbing, conflict, action/reaction, focus, and *stage directions*.	Students identify and define the *parts of the stage*, and identify and describe the crisis, resolution, and theme of the play.
A2 Production	Students select or make props, costumes, set pieces, and/or puppets and practice using them appropriately.	Students select and make props, costumes, set pieces, and/or puppets and present a rehearsed scene.	Students participate in the presentation of a performance from pre-show through *strike*. a. Identify and explain the roles of production staff. b. Design and select props, costumes and stage pieces, and use them appropriately and safely. c. Build scenic elements to fit production design. d. Experiment with lighting sound, and costume in scene development. e. Direct or stage manage a scene. f. Describe basic technical needs for a theater production, including lights, sound, props, and costumes.	Students fulfill at least one technical role from pre-show through *strike*. a. Apply technical knowledge and skills to collaboratively and safely create and use theater props, costumes, and stage pieces. b. Direct or stage-manage a scene or full production. c. Develop specific light and sound cues and use them in scene development. d. Participate in the audition process.

A. Disciplinary Literacy - Visual Arts: Students show literacy in the art discipline by understanding and demonstration of concepts, skills, terminology, and processes.

	PK-2 *PERFORMANCE INDICATORS*	3-5 *PERFORMANCE INDICATORS*	6-8 *PERFORMANCE INDICATORS*	9-Diploma *PERFORMANCE INDICATORS*
A1 Artist's Purpose	Students recognize a variety of purposes for making art, including telling a story, communicating emotion, or beautifying functional objects.	Students explain purposes for making art in different times and places, including cultural traditions, personal expression, and communication of beliefs.	Students explain and compare different purposes of artists and their artwork, in the context of time and place.	Students research and explain how art and artists reflect and shape their time and culture.
A2 Elements of Art and Principles of Design	Students identify features of *composition*. a. *Elements of Art*: line, space, shape, color, texture, form, and value. b. *Principles of Design*: pattern and balance.	Students describe features of *composition*. a. *Elements of Art*: line, space, shape, color, texture, form, and value. b. *Principles of Design*: balance, pattern, emphasis, unity, movement, and proportion.	Students compare features of *composition* both within an art work and among art works. a. *Elements of Art*: line, space, shape, color, texture, form, and value. b. *Principles of Design*: balance, pattern, emphasis, unity, movement, proportion, and rhythm.	Students evaluate all the features of *composition*. a. *Elements of Art*: line, space, shape, color, texture, form, and value. b. *Principles of Design*: balance, pattern, emphasis, unity, movement, proportion, and rhythm.
A3 Media, Tools, Techniques, and Processes	Students name art *media* and associated *tools*, for multiple *art forms* and *genres*.	Students describe a variety of *media* and associated *tools, techniques*, and *processes* for multiple *art forms* and *genres*.	Students explain the effects of *media* and their associated *tools, techniques*, and *processes* using *elements, principles* and expressive qualities in *art forms* and *genres*.	Students compare the effects of *media* and their associated *tools, techniques,* and *processes* using *elements, principles* and expressive qualities in *art forms* and *genres*.

B. Creation, Performance, and Expression – Dance: Students create, perform, and express ideas through the art discipline.

	PK-2 *PERFORMANCE INDICATORS*	3-5 *PERFORMANCE INDICATORS*	6-8 *PERFORMANCE INDICATORS*	9-Diploma *PERFORMANCE INDICATORS*
B1 Communication	No performance indicator. Although no performance indicators are stated students are expected to have instructional experiences that help them to express themselves through movement.	Students use movement to express a basic idea and share it with their peers.	Students use movement to express and communicate, a story, a piece of music, an artwork, or an emotion.	Students create an original piece of choreography using the elements of dance. a. Improvise new movements. b. Manipulate learned movements.
B2 Sequencing	Students develop a short dance sequence with a beginning, middle, and end.	Students develop a *dance phrase* with a beginning, middle, and end, accurately repeating it, and then varying it.	Students create and develop dance sequences. a. Create and develop dance sequences based on personal ideas or *concepts* from other sources. b. Accurately reproduce a more complex or pre-existing choreographed movement sequence as a solo or in a small group.	Students create both solo and ensemble dance works accurately producing an original or pre-existing complex movement sequence with *rhythmic acuity*.
B3 Solving Challenges	Students experiment with a variety of *movement challenges* alone or in a group.	Students solve *movement challenges* involving one or more movement *concepts* alone or with a partner.	Students use improvisation to discover and invent movement sequences and solve *movement challenges*.	Students solve, with a group, increasingly complex *movement challenges* involving several dance concepts.
B4 Technical	Students identify and select props or costumes to	Students select props or costumes to enhance a *dance*	Students identify how light, costume, or sound changes the	Students explain or include specific decisions about

Aspects	enhance a short dance sequence.	*phrase*.	effects of a dance sequence.	costumes, lights and sound in a piece of choreography.

B. Creation, Performance, and Expression – Music: Students create, perform and express through the art discipline.

	PK-2 *PERFORMANCE INDICATORS*	3-5 *PERFORMANCE INDICATORS*	6-8 *PERFORMANCE INDICATORS*	9-Diploma *PERFORMANCE INDICATORS*
B1 Style/Genre	Students create or perform music of various styles and *genres* by applying grade span appropriate knowledge and skills as referenced in Music Standard A.	Students create or perform music of various styles and *genres* by applying grade span appropriate knowledge and skills as referenced in Music Standard A.	Students accurately perform music of various styles and *genres* by applying grade span appropriate knowledge and skills as referenced in Music Standard A.	Students accurately perform music of various styles and *genres* by applying grade span appropriate knowledge and skills as referenced in Music Standard A.
B2 Composition	Students use grade span appropriate standard or non-standard *notation* as referenced in Music Standard A.	Students create their own *compositions* by applying grade span appropriate standard *notation* as referenced in Music Standard A.	Students compare musical ideas expressed in their own *compositions* or the *compositions* of others.	Students analyze and evaluate musical ideas expressed in their own *compositions* or the *compositions* of others.

B. Creation, Performance, and Expression - Theater: Students create, perform and express through the art discipline.

	PK-2 *PERFORMANCE INDICATORS*	3-5 *PERFORMANCE INDICATORS*	6-8 *PERFORMANCE INDICATORS*	9-Diploma *PERFORMANCE INDICATORS*
B1 Movement	Students develop movement skills by participating in show and tell, skits, puppet shows, and/or theater games.	Students demonstrate *blocking* in a play.	Students incorporate gesture and *stage business* into portrayal of a role.	No performance indicator.
B2 Character	Students demonstrate a character by participating in puppet shows, skits, and/or	Students demonstrate the ideas, moods, emotions, and/or feelings of a character, with	Students demonstrate development of a character's attitude and point of view by	Students demonstrate development of a character's attitude and point of view using

	theater games.	script and improvisation based on fictional/non-fictional stories and project voice using proper posture and breathing techniques.	adjusting voice tone/level and timing and using *non-verbal techniques.*	*physicality* and voice tone and level, and timing to communicate ideas, moods, and feelings.
B3 Improvisation	Students improvise with characters, setting, and plot using grade appropriate theater games.	Students improvise with characters, setting, plot, motivation, voice, and *body part isolations*, using grade appropriate theater games.	Students improvise with *blocking*, relationships, and technical effects building on previous knowledge and skills using grade appropriate theater games.	Students build on previous knowledge and skills to improvise in grade appropriate theater games and during performance if necessary to address an unforeseen circumstance in a production.

B. Creation, Performance, and Expression - Visual Arts: Students create, express, and communicate through the art form.

	PK-2 *PERFORMANCE INDICATORS*	3-5 *PERFORMANCE INDICATORS*	6-8 *PERFORMANCE INDICATORS*	9-Diploma *PERFORMANCE INDICATORS*
B1 Media Skills	Students use basic *media, tools* and *techniques* to create original art works.	Students use a variety of *media, tools, techniques*, and *processes* to create original art works.	Students choose suitable *media, tools, techniques,* and *processes* to create original art works.	Students choose multiple suitable *media, tools, techniques*, and *processes* to create a variety of original art works.
B2 Composition Skills	Students use *Elements of Art* and *Principles of Design* to create original art works.	Students use *Elements of Art* and *Principles of Design* to create original art works including paintings, 3D objects, drawings from imaginary and real life, and a variety of other *media* and visual *art forms*.	Students use *Elements of Art* and *Principles of Design* to create original art works that demonstrate different styles in paintings, 3D objects, drawings from imaginary and real life, and a variety of other *media* and visual *art form*s.	Students use *Elements of Art* and *Principles of Design* to create original art works that demonstrate development of personal style in a variety of *media* and visual *art forms*.

B3 Making Meaning	Students create art works that communicate ideas and feelings and demonstrate skill in the use of *media, tools, techniques,* and *processes.*	Students create art works that communicate ideas, feelings, and meanings and demonstrate skill in the use of *media, tools, techniques,* and *processes.*	Students create art works that communicate an individual point of view. a. Demonstrate skills in the use of *media, tools, techniques*, and *processes*. b. Demonstrate knowledge of visual art concepts. c. Communicate a variety of ideas, feelings, and meanings.	Students create a body of original art work. a. Demonstrates sophisticated use of *media, tools, techniques*, and *processes*. b. Demonstrates knowledge of visual art concepts. c. Communicates a variety of ideas, feelings, and meanings.
B4 Exhibition	Students prepare art works for display.	Students prepare art works for display in the classroom, school, or public location.	Students choose and prepare art works for display in the classroom, school, or public location, and articulate an artistic justification for their selection.	Students choose, prepare, and help with exhibiting their works in the classroom, school, or public location, and articulate an artistic justification for their selection.

C. Creative Problem Solving: Students approach artistic problem solving using multiple solutions and the creative process.

	PK-2 *PERFORMANCE INDICATORS*	3-5 *PERFORMANCE INDICATORS*	6-8 *PERFORMANCE INDICATORS*	9-Diploma *PERFORMANCE INDICATORS*
C1 Application of Creative Process	Students identify and demonstrate *creative problem solving* skills. a. Students improvise to solve problems in the performing arts. b. Students imagine and	Students describe and apply steps of *creative problem solving*. a. Identify problem. b. Define problem. c. Generate a variety of solutions.	Students describe and apply creative-thinking skills that are part of the *creative problem solving* process. a. *Fluency* b. *Flexibility* c. *Elaboration*	Students apply and analyze *creative problem solving* and creative-thinking skills to improve or vary their own work and/or the work of others.

	share several possible solutions to apply to challenges in creating art making.	d. Implement solutions. e. Evaluate solutions.	d. *Originality* e. *Analysis*	

D. Aesthetics and Criticism: Students describe analyze, interpret, and evaluate art (dance, music, theater, and visual art).

	PK-2 *PERFORMANCE INDICATORS*	3-5 *PERFORMANCE INDICATORS*	6-8 *PERFORMANCE INDICATORS*	9-Diploma *PERFORMANCE INDICATORS*
D1 Aesthetics and Criticism	Students observe, listen to, describe and ask questions about *art forms*. a. Describe the *art form* by applying grade span appropriate arts *concepts*, terminology, skills and processes as referenced in Standard A. b. Ask questions about the *art form* to further understand how the *artist* created/performed the work of art. c. Students recognize a variety of purposes for making/performing art works, including telling a story, communicating emotions and ideas.	Students describe and compare *art forms*. a. Describe and compare arts *concepts*, terminology, skills and processes as referenced in Standard A. b. Ask questions about an *art form* to further understand the concepts, skills, and processes used to create/perform the work of art. c. Explain purposes for making art in different times and places, including cultural traditions, personal expression, and communication of	Students compare and analyze *art forms*. a. Use *concepts*, vocabulary, skills, and processes as referenced in Standard A to compare and analyze the *art forms*. b. Compare the quality and effectiveness of art works using multiple criteria from observations, print and/or non-print resources. c. Compare the effectiveness of selected media, techniques, and processes in communicating ideas. d. Explain and compare	Students analyze and evaluate *art forms*. a. Describe, analyze, interpret, and evaluate *art forms* using grade-span appropriate arts *concepts*, vocabulary, skills, and processes. b. Analyze and evaluate varied interpretations of works of art using evidence from observations and a variety of *print and/or non-print sources*. c. Demonstrate an understanding of the difference between a personal opinion and an educated judgment.

		beliefs.	different purposes of artists and art work in the context of time and place.	d. Research and explain how art and artists reflect and shape their time and culture.

E. Students Understand the Relationship Among the Arts, History and World Culture; and Make Connections Among the Arts and Other Disciplines, Daily Life, Goal Setting, and Interpersonal Interaction.

	PK-2 *PERFORMANCE INDICATORS*	3-5 *PERFORMANCE INDICATORS*	6-8 *PERFORMANCE INDICATORS*	9-Diploma *PERFORMANCE INDICATORS*
E1 The Arts and History and World Cultures	Students identify family or community symbols and celebrations in the visual/performing arts from different world cultures.	Students explain that the visual/performing arts help people to understand history and/or world cultures.	Students compare products of the visual/performing arts to understand history and/or world cultures.	Students analyze the characteristics and purposes of products of the visual/performing arts to understand history and/or world cultures.
E2 The Arts and Other Disciplines	Students identify connections between and among the arts and other disciplines.	Students compare characteristics between and among the arts and other disciplines.	Students explain similar concepts across disciplines.	Students analyze similar concepts across disciplines.
E3 Goal Setting	Students identify choices and behaviors that lead to success in the arts.	Students identify and demonstrate choices and behaviors that will lead to success in the arts including *time management*, interpersonal interactions, skill development and goal setting.	Students make short- and long-term goals related to *time management*, interpersonal interactions or skill development that will lead to success in the arts.	Students make short- and long-term goals based on rigorous criteria and related to *time management*, interpersonal interactions or skill development that will lead to success in the arts.

	PK-2 *PERFORMANCE INDICATORS*	3-5 *PERFORMANCE INDICATORS*	6-8 *PERFORMANCE INDICATORS*	9-Diploma *PERFORMANCE INDICATORS*
E4 Impact of the Arts on Life-style and Career	Students identify the arts in life experiences. a. Identify the activities, role and careers of a visual or performing *artist.* b. Describe *common arts activities*. c. Describe the way the arts make them feel.	Students describe the contribution of the arts on lifestyle and career choices. a. Identify the various roles of and requirements to become *artists*. b. Describe the benefit of participation in the arts on a healthy lifestyle including the use of leisure time.	Students explain the impact of artistic and career choices on self, others, and the natural and *human-made environment.*	Students explain how their knowledge of the arts relates to *school-to-school, school-to-work*, and other career and life decisions including that the arts are a means of renewal and recreation.
E5 Interpersonal Skills	Students identify positive interpersonal skills that impact the quality of their art and participation in the arts. a. Getting along with others. b. Respecting differences. c. Working as a team/ensemble. d. Managing conflict e. Accepting/giving/ using constructive feedback. f. Accepting responsibility for	Students identify and demonstrate the positive interpersonal skills necessary to get along with others and participate in the arts. a. Getting along with others. b. Respecting differences. c. Working as a team/ensemble. d. Managing conflict e. Accepting/giving/ using constructive feedback. f. Accepting	Students demonstrate positive interpersonal skills and analyze how interpersonal skills affect participation in the arts. a. Getting along with others. b. Respecting differences. c. Working as a team/ensemble. d. Managing conflict. e. Accepting/giving/ using constructive feedback. f. Accepting responsibility for	Students demonstrate positive interpersonal skills and reflect on the impact of interpersonal skills on personal success in the arts. a. Getting along with others. b. Respecting differences. c. Working as a team/ensemble. d. Managing conflict. e. Accepting/giving/ using constructive feedback. f. Accepting

	personal behavior. g. Demonstrating ethical behavior. h. Following established rules/etiquette for observing/listening to art. i. Demonstrating safe behavior.	responsibility for personal behavior g. Demonstrating ethical behavior. h. Following established rules/etiquette for observing/listening to art. i. Demonstrating safe behavior.	personal behavior. g. Demonstrating ethical behavior. h. Following established rules/etiquette for observing/listening to art. i. Demonstrating safe behavior.	responsibility for personal behavior. g. Demonstrating ethical behavior. h. Following established rules/etiquette for observing/listening to art. i. Demonstrating safe behavior.

WORLD LANGUAGES

Language and communication are at the heart of the human experience, whether communication occurs face-to-face, in writing, or through the arts and media. Maine public school graduates must have the linguistic and cultural skills to communicate successfully in a pluralistic society at home and abroad. The need to understand and communicate with other peoples of the world is more urgent today than a decade ago because of the forces of globalization. All students will develop a level of proficiency in at least one language other than English. To succeed, all students must study language and culture in an integrated fashion, beginning in the early elementary grades and extending through their school experience. A PK-Diploma structure in all schools is foundational to the State vision for world languages

The organizing principle in today's World Language classrooms is communication, which highlights *how* (grammar) and *what* (vocabulary and content), as well as *why, to whom, and when* (social and cultural aspects of language). While grammar and vocabulary remain essential tools for communication, learning to use a second language in meaningful and appropriate ways is the ultimate goal of world language instruction. In the study of classical languages such as Latin or ancient Greek, proficiency will emphasize the ability to understand the written language over oral communication, and to recognize the linguistic and historical importance of the language and the people who spoke it.

Differentiation and Commonality Among World Languages – The World Languages Standards outline both common and unique descriptors for classical and modern languages. Distinctions between modern and classical languages are identified only where necessary to acknowledge significant differences in communication modes and resources. In addition, the performance indicators and descriptors of modern languages include American Sign Language (ASL).

For instruction in ASL, it may be necessary to adapt some performance indicators and/or descriptors. In a few instances, it may be necessary to omit some descriptors.

Multiple Entry Points - Throughout the standards for World Languages, the sequence of performance indicators is based on a PK-Diploma sequence of study of mainly cognate languages (languages that contain words from two languages that are similar in spelling and meaning or sound and meaning). Some students may elect to participate in the study of more than one world language. In these instances it is important to recognize that the PK-Diploma grade span represents a continuum of learning. Students who begin a language later in the PK-Diploma sequence of study and students who study a non-cognate language may not be able to reach the highest level performance indicators (9-Diploma) without additional immersion experiences or a heritage language background. Students beginning additional foreign languages at grade 9 or above should not be held accountable for performance indicators at this level. Rather, the instruction will need to be aligned to the appropriate PK-Diploma level of proficiency for the students and advance from that point.

Instruction and Support in the Target Language - All performance indicators for modern languages, with the exception of one (A4), are to be accomplished in the target language. Students engaged in a sequential PK-Diploma modern language program will have developed the knowledge and skills necessary to communicate basic understandings for all performance indicators using target language at a level appropriate to the grade span. Proficiency in the study of classical languages, such as Latin or ancient Greek, emphasizes the ability to understand written language over

oral communication although oral communication remains a component. Accordingly, performance indicators A2, A4, B1, B2, B3, C1, C2 and D1 may be accomplished in the target language or English.

Level of Discourse – Standard A outlines the end of grade span proficiencies for communication skills. The document assumes that as students learn the knowledge and skills outlined in Standards B, C, and D, they will do so by developing/using communication skills appropriate to their grade span. By the end of the grade span, students should be able to demonstrate their proficiency of the standards and performance indicators related to Standards B, C, and D using communication skills appropriate for the end of their grade span.

OUTLINE OF WORLD LANGUAGES STANDARDS AND PERFORMANCE INDICATORS

A. Communication
    1. Interpersonal
    2. Interpretive
    3. Presentational
    4. Language Comparisons
B. Cultures
    1. Practices and Perspectives
    2. Products and Perspectives
    3. Comparisons with Own Culture
C. Connections
    1. Knowledge of Other Content Areas
    2. Distinctive Viewpoints
D. Communities
    1. Communities

A. Communication: Students communicate in the target language.

	PK – 2 *PERFORMANCE INDICATOR*	3-5 *PERFORMANCE INDICATOR*	6-8 *PERFORMANCE INDICATOR*	9-Diploma *PERFORMANCE INDICATOR*
A1 *Interpersonal* *(L) = Link to future supporting information*	Students engage in simple interactions to provide and obtain information using single words or learned phrases. Modern and Classical a. Use some culturally and age appropriate *courtesy expressions*. (L) b. Participate in brief *guided exchanges* related to likes and dislikes. (L) c. Make age-appropriate introductions of classmates, family members, and friends. d. Ask and answer simple	Students engage in simple conversations to provide and obtain information using learned phrases and simple sentences. Modern and Classical a. Recognize and use *appropriate forms of address* and *courtesy expressions* in a variety of situations. (L) b. Ask and answer simple questions regarding familiar activities. c. Give and respond to simple oral/signed directions and commands, and make routine requests in the classroom. (L) Modern only d. Participate in brief guided conversations related to needs, interests, likes, dislikes, and *states of being*. e. Express basic agreement and disagreement.	Students engage in simple conversations to provide and obtain information, and to express feelings and emotions by creating simple sentences and/or strings of sentences. Modern Language students use pronunciation and *intonation* patterns, or appropriate facial expressions and non-manual markers (ASL) that are comprehensible to speakers accustomed to interacting with language learners. Modern and Classical a. Ask and answer a variety of questions on familiar topics using sign language or orally and in writing. Modern only b. Participate in conversations on a variety of everyday topics and to meet personal needs. (L) c. Give and respond to directions and commands using sign language or orally and in writing. (L)	Students express their own thoughts and opinions about familiar topics and elicit the thoughts and opinions of others by using strings of sentences and/or short paragraphs. Modern Language students use pronunciation and *intonation* patterns, or appropriate facial expressions and non-manual markers (ASL) that would be comprehensible to a *native speaker* accustomed to interacting with language learners. Modern only a. Interact in a variety of social situations. b. Provide and exchange detailed information on familiar topics using sign language or orally and in writing. c. Describe and explain *states of being* and feelings using sign language or orally and in writing.

	learned questions. (L)		Classical only d. Exchange information in writing about familiar topics. (L)	d. Express agreement and disagreement using sign language or orally and in writing, supporting opinions with simple reasoning. Classical only e. Exchange information in writing on identified topics. (L)
A2 Interpretive For classical languages only, the 6-8 and 9-diploma indicators may be accomplished in the target language, English or a combination of the two. *(L) = Link to future supporting information*	Students comprehend and respond to simple spoken/signed language in a classroom setting. Modern and Classical a. Respond to simple oral/signed directions, commands, and routine requests in the classroom. (L) b. Demonstrate comprehension of oral/signed descriptions by identifying people and objects. (L)	Students comprehend and respond to simple signed or spoken and written language in *familiar contexts*. Modern only a. Comprehend isolated words, phrases and simple sentences in familiar print materials. (L) b. Respond to simple written directions. (L) c. Respond to oral/signed directions, commands, and routine requests. (L) d. Demonstrate comprehension of oral/signed and written descriptions by identifying people and objects. (L) Classical only e. Identify people and objects based on written	Students comprehend and respond to brief conversations, narratives, and recorded material in *familiar contexts*. Modern and Classical a. Demonstrate comprehension of short narrative texts. (L) Modern only b. Identify main ideas, topics, and some details from simple signed or oral and written texts or passages. (L) Classical only c. Identify main ideas, topics, and some details from simple written texts	Students comprehend and respond to conversations, narratives, and recorded material in *familiar contexts* that are longer and/or more complex than those in the 6-8 grade span. Modern and Classical a. Identify main ideas, topics and some specific information in a variety of *authentic* written/signed *materials*. (L) Modern only b. Demonstrate comprehension of *authentic* short narratives and/or films. (L) c. Identify main ideas,

		descriptions. f. Demonstrate comprehension of simple texts.		topics and some specific information in a variety of *authentic* oral/signed *materials*. (L) Classical only d. Demonstrate comprehension of *authentic texts*. e. Interpret the author's use of *literary devices* evident in prose and poetry.
A3 Presentational *(L) = Link to future supporting information*	Students use memorized words or phrases and visuals in short oral/signed presentations. Modern and Classical a. Provide simple descriptions of people, places, and objects.	Students use phrases and simple sentences in rehearsed signed or oral and written presentations on familiar topics. Modern and Classical a. Write/sign familiar words and phrases, and short messages, descriptions or simple poems. Modern only b. Provide simple signed or oral and written descriptions of people, places, and objects. c. Present very simple short plays/skits and/or very simple short written texts. Classical only d. Read aloud from an *adapted*	Students use simple sentences and strings of simple sentences to produce short signed or oral and written presentations based on familiar topics with some accuracy in form and pronunciation. Modern only a. Write/sign messages using a prescribed, *culturally appropriate* format. (L) b. Produce and present simple creative works using sign language or orally and in writing. c. Convey personal preferences or information pertaining to everyday life using sign language or orally and in writing. (L)	Students express their own thoughts to describe and narrate in signed or oral and written presentations using strings of sentences and/or short paragraphs and with sufficient accuracy in form and pronunciation that would be understood by *native speakers* accustomed to interacting with language learners. Modern and Classical a. Read *authentic passages* aloud with appropriate pronunciation, phrasing and *intonation*. (L) Modern only

		text.	Classical only d. Create written products based on a given topic. (L) e. Read aloud from *adapted texts* with appropriate *intonation* and pronunciation. (L)	b. Relate orally/using sign language a story about a personal experience or event. (L) c. Paraphrase and/or summarize texts in sign language or orally and in writing using a *presentational format*. d. Write/sign brief narrative and expository/informational compositions. (L) e. Give oral/signed presentations on familiar subjects related to a culture(s) in which the *target language* is spoken. (L) Classical only f. Paraphrase and/or summarize texts orally or in writing in a *presentational format* using the *target language* or English.
A4 Language Comparisons For both modern and classical	No performance indicator. Although no performance indicators are stated students are expected to have	Students recognize a variety of similarities and differences between the *target language* and their own. Modern and Classical a. Recognize *word borrowings*	Students compare the *target language* with their own language in order to better understand *language systems*. Modern and Classical a. Compare basic	Students use their understanding of the *nature of language* to enhance their communication in the *target language*. Modern and Classical

languages, indicators may be accomplished in the target language or in English. *(L) = Link to future supporting information*	instructional experiences related to similarities and differences between the target language and their own language.	and *cognates* among languages. b. Recognize differences in the *writing systems* among languages. † c. Recognize some *idiomatic expressions* of the *target language*.	grammatical structures and *syntax* between languages. (L) b. Compare *idiomatic expressions* between languages. (L) c. Compare pronunciation systems between languages. † (L) d. Recognize that there are regional and/or historical variations in spoken/signed language. e. Recognize connections between languages through the identification of *cognates*. (L)	a. Compare grammatical structures and *syntax* between languages that are more complex than those in the 6-8 grade span. b. Identify examples of vocabulary, in both languages, that do not translate directly from one language to another. (L) c. Use *idiomatic expressions* and/or proverbs in the *target language*. (L) d. Identify examples of vocabulary in English and the *target language* that convey different meanings in different *contexts*.

† For instruction in ASL, it may be necessary to adapt some performance indicators and/or descriptors. In a few instances, it may be necessary to omit some descriptors.

B. Cultures: Students demonstrate an understanding of a culture(s) in which the target language is spoken.

	PK – 2 *PERFORMANCE INDICATOR*	3-5 *PERFORMANCE INDICATOR*	6-8 *PERFORMANCE INDICATOR*	9-Diploma *PERFORMANCE INDICATOR*
B1 Practices and Perspectives For classical languages only, indicators may be accomplished in the target language or English. *(L) = Link to future supporting information*	Students identify and imitate some basic *culturally-appropriate practices*. Modern and Classical a. Use *culturally-appropriate courtesy expressions*, and demonstrate greeting and leave-taking. b. Recognize cultural differences including dress, mealtime practices, gestures, and/or celebrations.	Students identify and demonstrate some basic *culturally-appropriate practices* of daily life. Modern and Classical a. Understand and use *culturally-appropriate* polite requests and *courtesy expressions*, and demonstrate greeting and leave-taking behaviors in a variety of age-appropriate social situations. b. Recognize age-appropriate similarities and differences related to *cultural practices of a culture(s)* in which the *target language* is spoken. (L)	Students describe *perspectives of a culture(s*) in which the *target language* is spoken. Modern and Classical a. Describe examples of beliefs common to a culture(s) where the *target language* is spoken. (L) b. Describe attitudes common to a culture(s) in which the *target language* is spoken. (L)	Students identify and explain how *perspectives* are related to cultural *practices of a culture(s)* in which the *target language* is spoken. Modern and Classical a. Identify and explain the reason for significant cultural *practices of a culture(s)* in which the *target language* is spoken. (L) b. Discuss stereotypes associated with *perspectives of a culture(s)* in which the *target language* is spoken. (L) c. Identify differences in *cultural practices* among peoples that speak the same language.

	PK – 2 *PERFORMANCE INDICATOR*	3-5 *PERFORMANCE INDICATOR*	6-8 *PERFORMANCE INDICATOR*	9-Diploma *PERFORMANCE INDICATOR*
B2 Products and Perspectives For classical languages only, indicators may be accomplished in the target language or English.	No performance indicator. Although no performance indicators are stated students are expected to have instructional experiences related to products of the *target culture*.	Students identify *products of a culture(s)* in which the *target language* is spoken.	Students identify objects used in daily life, works of art or historical artifacts that reflect the *perspectives of a culture(s)* in which the *target language* is spoken.	Students explain how political structures, historical artifacts, literature and/or visual and performing arts reflect the *perspectives of a culture(s)* in which the *target language* is spoken.
B3 Comparisons with Own Culture For classical languages only, indicators may be accomplished in the target language or English. *(L) = Link to future supporting information*	No performance indicator. Although no performance indicators are stated students are expected to have instructional experiences related to comparison of the *target culture* with their own culture.	Students compare some common culturally-appropriate *products and practices* of daily life *of a culture(s)* in which the *target language* is spoken to those of their own culture. <u>Modern and Classical</u> a. Compare daily activities of their own lives to daily activities of individuals in a culture(s) in which the *target language* is spoken. (L) b. Compare foods, celebrations, dress, and/or dwellings from a culture(s) in which the *target language* is spoken with those of their own culture.	Students compare *perspectives* related to *products* and *practices of a culture(s)* in which the *target language* is spoken to their own cultural *perspectives*. <u>Modern and Classical</u> a. Explain how verbal and non-verbal communication in a culture(s) in which the *target language* is spoken differs from the students' own culture. (L) b. Recognize contributions of a culture(s) in which the *target language* is spoken to life in the United States including foods, celebrations, dress and/or	Students analyze *products, practices,* and *perspectives* to identify contributions of a culture(s) in which the *target language* is spoken. <u>Modern and Classical</u> a. Identify influential figures and explain their importance. b. Explain the reasons for a variety of similarities and differences between students' own culture and that of the *target language*. (L) <u>Modern only</u>

			architecture.	c. Use the *target language* in a manner that would be considered appropriate by *native speakers*. (L)

† For instruction in ASL, it may be necessary to adapt some performance indicators and/or descriptors. In a few instances, it may be necessary to omit some descriptors.

C. Connections: Students expand their knowledge by connecting their study of a language(s) with other content areas.

	PK – 2 *PERFORMANCE INDICATOR*	3-5 *PERFORMANCE INDICATOR*	6-8 *PERFORMANCE INDICATOR*	9-Diploma *PERFORMANCE INDICATOR*
C1 Knowledge of Other Content Areas For classical languages only, indicators may be accomplished in the target language or English. *(L) = Link to future supporting information*	Students identify connections between the *target language* and/or a culture(s) in which the *target language* is spoken and other content areas through their study of the *target language.* (L) Modern and Classical a. Identify numbers for counting. b. Identify common greetings.	Students identify connections between the *target language* and/or a culture(s) in which the *target language* is spoken and other content areas. (L) Modern and Classical a. Identify common expressions and traditions. b. Identify examples of the visual/performing arts. c. Identify products important to livelihood of the people. d. Identify the earth's major geographical features.	Students apply information acquired in other content areas to further their knowledge and skills in the *target language*. Modern and Classical a. Use the writing process learned in English Language Arts when writing for the *target language* class. † (L) b. Apply research skills to further their knowledge in the *target language*. c. Apply knowledge from other content areas including literature, social studies, science and technology, and/or the	Students use the *target language* to enhance their knowledge of other content areas. Modern and Classical a. Provide examples of grammatical knowledge acquired in the *target language* that are used to achieve a better understanding of grammatical structures in English. b. Provide examples of information gathered through *target language* resources that are used in other content areas.

			visual and performing arts to tasks in the language classroom. (L)	(L)

† For instruction in ASL, it may be necessary to adapt some performance indicators and/or descriptors. In a few instances, it may be necessary to omit some descriptors.

	PK – 2 *PERFORMANCE INDICATOR*	3-5 *PERFORMANCE INDICATOR*	6-8 *PERFORMANCE INDICATOR*	9-Diploma PERFORMANCE INDICATOR
C2 Distinctive Viewpoints For classical languages only, indicators may be accomplished in the target language or English. *(L) = Link to future supporting information*	No performance indicator. Although no performance indicators are stated students are expected to have instructional experiences related to a variety of print and non-print materials created in other languages.	Students recognize some distinctive viewpoints available only through sources from the *target language* and *associated* culture(s). <u>Modern and Classical</u> a. Identify examples of simple narrative selections from a culture(s) in which the *target language* is spoken. <u>Classical only</u> b. Identify information about the Roman/Greek world by reading passages with culturally *authentic settings.* (L)	Students locate resources and identify ideas about a culture(s) in which the *target language* is spoken, available only through sources in the *target language* and associated culture(s). <u>Modern and Classical</u> a. Access media or other *authentic sources* from the *target language* and a culture(s) in which the *target language* is spoken to gain information and identify a cultural *perspective* different from the students' own viewpoints.	Students describe ideas about the *target language* and associated culture(s) available only through sources from that culture(s) in which the *target language* is spoken. <u>Modern and Classical</u> a. Interpret short prose, poetry or plays in the *target language* and of a culture(s) in which the *target language* is spoken, and make connections to the viewpoints of the associated culture(s). b. Access selected magazines, newspapers, and electronic media in the *target language* for information about a culture(s) in which the *target language* is spoken. (L)

				c. Identify viewpoints of a culture(s) in which the *target language* is spoken, using *primary sources* including *authentic entertainment media* available to speakers of the *target language*. (L).

D. Communities: Students encounter and use the language both in and beyond the classroom for personal enjoyment and lifelong learning.

	PK – 2 *PERFORMANCE INDICATOR*	3-5 *PERFORMANCE INDICATOR*	6-8 *PERFORMANCE INDICATOR*	9-Diploma *PERFORMANCE INDICATOR*
D1 Communities For classical languages only, performance indicators may be accomplished in a combination of the target language or in English. *(L) = Link to future supporting information*	Students include family, friends or peers in activities using the *target language*.	Students demonstrate understanding and use of the *target language* and their knowledge of a culture(s) in which the *target language* is spoken through community involvement. Modern and Classical a. Demonstrate use of oral/signed and/or written forms of the *target language* with family, friends, or peers. (L) b. Participate in activities using the *target language* which can benefit the school or broader community. (L) c. Ask questions and share knowledge about various	Students use their knowledge of the *target language* to communicate with *target language* speakers to obtain information on familiar topics, and to gain understanding of diverse culture(s). Modern and Classical a. Participate in and summarize school/community events related to the *target language* or associated culture(s). b. Identify community and online resources useful for research in the *target language* or associated	Students apply their knowledge of the *target language* to communicate with *target language* speakers and to understand the importance of culture and language in the 21st century. Modern and Classical a. Interact with people either in the community or online who are involved in a variety of professions that use the *target language*. b. Independently access a variety of *target language* sources for entertainment or

		aspects of a culture(s) in which the *target language* is spoken that demonstrate an interest in the *target language* and an associated culture(s). d. Access various aspects of a culture(s) in which the *target language* is spoken available through online resources or in the community. (L)	culture(s). c. Communicate with students of the *target language*. d. Describe language skills and cultural insights gained through real or *virtual travel*.	personal growth. c. Explain how personal, educational, and career opportunities are expanded and enhanced by knowledge of the *target language* and associated culture(s). Modern only d. Communicate with target language speakers using the *target language*.

† For instruction in ASL, it may be necessary to adapt some performance indicators and/or descriptors. In a few instances, it may be necessary to omit some descriptors.